Client report
to the Botanic Gardens and Parks Authority

BOTANIC GARDENS
& PARKS AUTHORITY

Fungi survey - Bold Park 2011

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Figures 1 - 8: Examples of fungi discovered in Bold Park during 2011, including four of the five species of the ectomycorrhizal genus *Inocybe* recorded in 2011 (Figures 1 – 4).

Figure 1: *Inocybe sp. 'jarrahae'* (BOUGHER 901). A new species to science.

Figure 2: *Inocybe sp.'tall pinkish- pruinose stem'* (BOUGHER 902). A new species to science.

Figure 3: *Inocybe sp. 1 'acaciae in ed'* *(BOUGHER 904).* A new species to science.

Figure 4: *Inocybe sp. 'dense fibrillose, convex'* *(BOUGHER 905).* A new species to science.

Figure 5: *Hemimycena hirsuta* (BOUGHER 722). A new record for Australia.

Figure 6: *Mycena fumosa* (BOUGHER 780). A new record for Western Australia.

Figure 7: *Coprinopsis* sp. *"peaches & cream"* (BOUGHER 911). Likely a new species to science.

Figure 8: *Peniophora cinerea* (BOUGHER 696). An abundant resupinate (skin) fungus at Bold Park.

Fungi - Bold Park 2011

Background and Objectives

Bold Park is a regionally significant bushland located in the west metropolitan area of Perth, Western Australia. The park incorporates 437 hectares of diverse vegetation types on Spearwood and Quindalup dune systems such as eucalypt and banksias woodlands, acacia shrublands, and coastal and limestone heath (Keighery *et al*., 1990; Barrett and Tay, 2005). A large diversity of fungi occurs in Bold Park but little is known about their identity or ecology. Many hundreds of species of microfungi, including some that benefit native orchids, are likely to occur in the park. In the first major study of fungi in the park and outline of management issues for fungi in the park, 120 species of macrofungi were identified in the 14 vegetation types surveyed in Bold Park over a two month period in 1999 (Bougher 1999).

Subsequent annual surveys to build a baseline inventory of fungal diversity in Bold Park were carried out in 4 vegetation types in 2002, 2003, 2004 and 2005 (Bougher 2002 - 2005). These surveys were undertaken in line with performance indicator no. 8 of the Bold Park Environmental Management Plan 2000-2005 which required that "Known species richness of native fungal taxa (is) retained over five years" (Botanic Gardens & Parks Authority 2000). Subsequently, fungi have been included in the Bold Park Management Plan for 2006-2011 (Botanic Gardens & Parks Authority 2006) as part of ongoing goals to conserve and protect the local biodiversity in Bold Park. Four annual fungi surveys for the Bold Park MP 2006-2011 have been carried out: in 4 vegetation types in 2007, 2008 and 2010, and in 14 vegetation types in 2009 (Bougher 2007, 2008, 2009, 2010). Most recently fungi have also been incorporated in the Bold Park Management Plan 2011-2016 (Botanic Gardens & Parks Authority 2011).

To date (prior to 2011), an estimated 461 fungi species have been recorded in the Park (see Bougher 2010). A summary table of fungal biodiversity data for Bold Park has been posted on the Perth Urban Bushland Fungi web site at www.fungiperth.org.au. It is likely that surveys so far have captured only a fraction of the fungi likely to exist in Bold Park. Fungi produce fruit bodies intermittently and unpredictably but the mycelia of each fungus may be active for long periods of each year. It is necessary to survey fruit bodies at the same location over many years if such data is to be used as an accurate measure of fungal diversity.

The current consultancy in 2011 undertook the fifth annual fungi survey for the Bold Park Management Plan 2006-2011 (Botanic Gardens & Parks Authority 2006), and the first for the Bold Park Management Plan 2011-2016 (Botanic Gardens & Parks Authority 2011). This survey addressed the following requirements for fungi relating to the current Bold Park Management Plan:

1. Field survey
- Inventory of fungi fruiting (including native & exotic, rare & endangered).
- Identity and description (key attributes) of fungi observed.
- Permanent reference resource at the Western Australian Herbarium of selected specimens.

2. Report
- Inventory and location of fungi observed during the current survey, identified to genus or species level, based on current survey: including possible designation as native and exotic, rare and endangered, beneficial, disease.
- Known vegetation and plant associations of fungal species obtained.

Methods

Fungi were recorded in Bold Park from early June to early July 2011. The park was also re-visited several times in early August as there had been significant rainfall throughout mid to late July (see Chart 1 below). Four vegetation types in Bold Park were surveyed for macrofungi (Table 1, Map 1). Brief visits were also made to vegetation types 5a and P, and one collection was made (in August) from a small stand of *Eucalyptus decipiens* near Zamia Trail to the south of the central pine plantation (veg. 1i). The surveys within the vegetation types were measured by a person x time basis – approximately 60 person time minutes per site each survey time. The number and intensity of surveys were dictated by weather conditions and limitations imposed by the consultancy contract. During collecting, particular attention was given to many of the main fungal microhabitats including open and mossy ground, litter, woody debris and logs, bark of living trees. Specific vegetation or plant associations of fungi were noted.

Fungi were identified to genus or species level by constructing morphological descriptions of the fungi collected, and examining key microscopic characteristics of specimens. Identifying fungi is often more complicated than identifying plants, as there are no complete keys to the Australian fungi (such as Blackall & Grieve for the W.A. plants) to refer to. There are very few guidebooks, and they are far from complete in coverage, and in many cases quite inaccurate.

A range of resources were utilized for identification: direct comparisons of macro and micro characters between Bold Park material and identified reference herbarium material (PERTH – Western Australian Herbarium), comparison with published mycological literature, and more generally by utilizing the author's own experience, knowledge and records. Identification enabled: (a) assessment of probable broad ecological roles of the fungi in community sustainability, (b) designation of fungi as native and exotic, and (c) a database of inventory data obtained for Bold Park comparable to available data of other tuart/banksia woodland bushland areas. All of the fungi collected were photographed and preserved as air-dried, coded herbarium voucher material lodged at the Department of Environment and Conservation's Western Australian Herbarium, Kensington (PERTH).

Chart 1: Rainfall for Perth in 2011 compared with the long-term average.

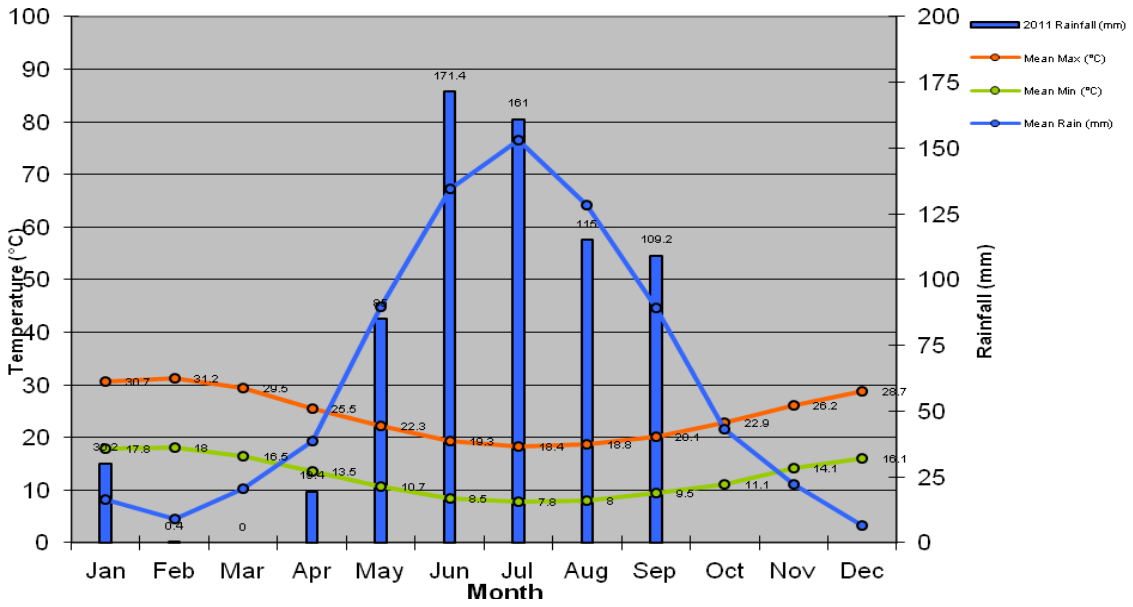
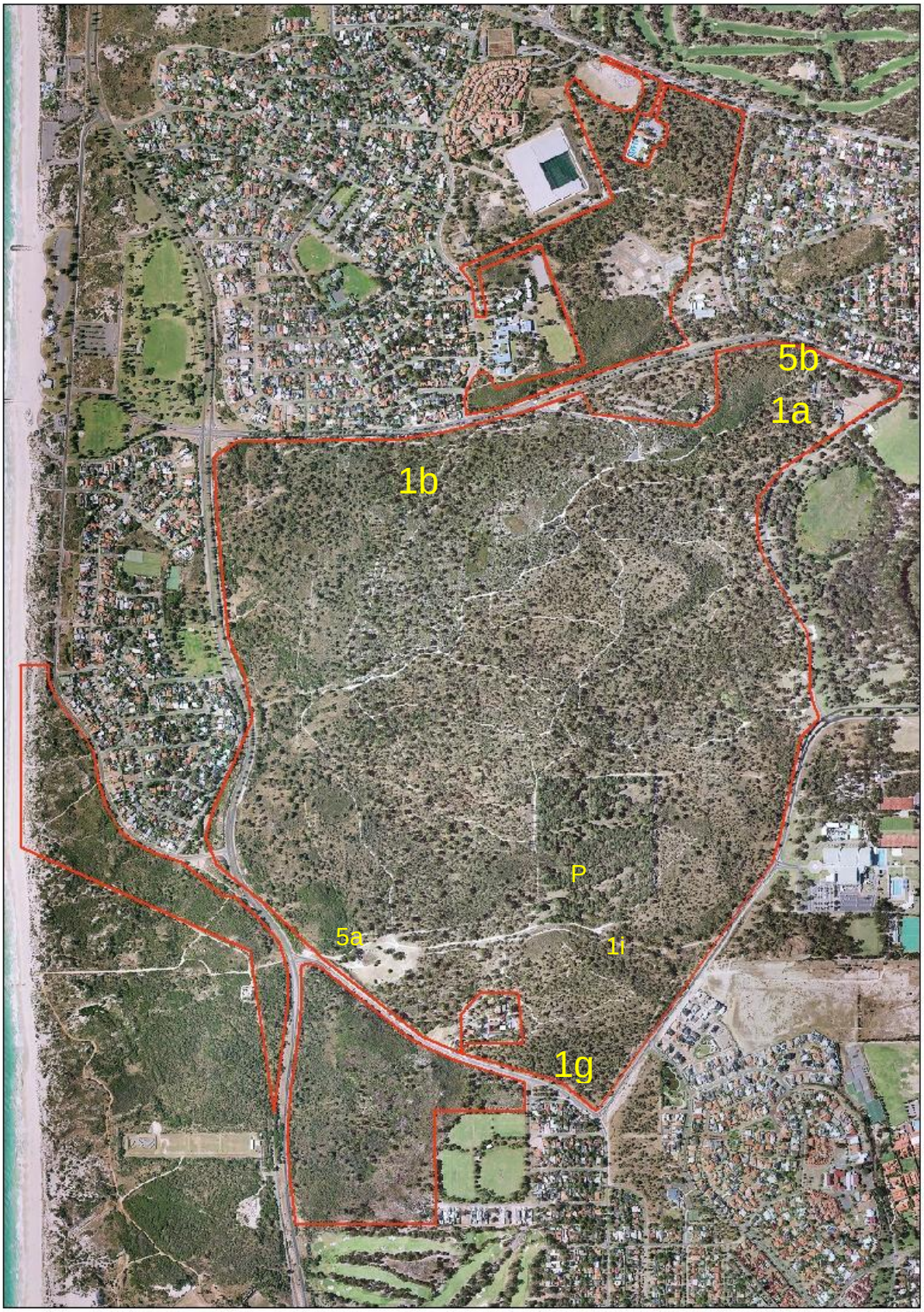


Table 1: Vegetation and plant community types surveyed for fungi, and number of sampling times for each type. Surveys undertaken during current consultancy indicated in blue, with sampling times in 2011 indicated. Surveys indicated in black were undertaken in the initial 1999 survey (Bougher, 1999) but not in 2011.

Vegetation code	Plant communities	2011 Survey days
Eucalypt Woodlands over Shrublands		
1a	Woodland of Eucalyptus gomphocephala over a variable understorey on grey sand	1
1b	Woodland of Eucalyptus gomphocephala over an understorey dominated by Allocasuarina humilis on grey sand	1
1d	Open woodland of Eucalyptus gomphocephala, with occasional Banksia attenuata and B. menziesii, over shrubs dominated by Macrozamia riedlei, Xanthorrhoea preissii, Acacia rostellifera, and Jacksonia spp. on grey sand	0
1e	Woodland of Corymbia calophylla, with occasional Eucalyptus gomphocephala, and Banksia spp., over tall shrubs on grey sand	0
1f	Woodland of Eucalyptus marginata and Corymbia calophylla over a variable, often disturbed understorey on grey sand	0
1g	Woodland to Open Woodland of Eucalyptus marginata over a variable understorey on grey sand	1
1h	Woodland of Eucalyptus decipiens over Melaleuca acerosa, Hardenbergia comptoniana, Xanthorrhoea preissii and mixed low shrubs and herbs on pale grey sand	0
1i	Open woodland of Eucalyptus decipiens, Banksia attenuata and Banksia menziesii	(brief)
Open Eucalypt Woodlands over Heath		
2a	Open Woodland of Eucalyptus gomphocephala over low to medium shrubs generally associated with heath communities, on grey sand	0
Woodlands dominated by Banksia		
4a	Woodland of Banksia attenuata and Banksia menziesii, with emergent Eucalyptus gomphocephala, over a variable understorey on grey sand	0
Shrublands		
5a	Closed shrubland of Acacia rostellifera over mixed shrubs and herbs on pale grey sand	(brief)
5b	Closed shrubland of Acacia xanthina over mixed shrubs and herbs on pale grey sand, often underlain with limestone	2
Wetlands and drainage lines		
9b	Woodland of Eucalyptus rudis on brown sandy-loam on fringes of Camel Lake	0
Modified areas		
D	Disturbed ground (including Skyline site)	0
P	Pine plantation - mainly Pinus pinaster, some Pinus radiata	(brief)

Map 1: Sites surveyed and briefly visited for fungi at Bold Park in 2011.
Surveys indicated by large labels; briefer visits indicated by smaller labels.



Results

A total of 117 species of fungi were recorded in 2011 during the period of this consultancy. The fungi represent 80 genera and 40 families (+ 9 species were unidentified and therefore genera and families unknown) (Table 2). All species are considered to be indigenous except 8 species designated as exotic or possibly exotic (introduced from outside Western Australia): *Hebeloma crustuliniforme, Inocybe rufuloides* (first record for Australia, see Bougher & Matheny 2011), *Puccinia myrsiphilli, Rhizopogon roseolus, Suillus collinitus;* and possibly *Agaricus campestris, Bolbitius vitellinus,* and *Volvariella speciosa.* Detailed data for the fungal collections from 2011 that were vouchered for permanent reference are given in Appendix 1.

- 15% of the current survey fungi (18 species) are considered to be new records for Bold Park.
- 85% of the fungi (99 species) in the current survey are considered to be the same as the species recorded in the previous surveys (Bougher 1999, 2002 - 2005, 2007 - 2010).
- *Mycena fumosa* discovered at Bold Park in 2011 is a new record for Western Australia.
- *Hemimycena hirsuta* is a new record for Australia.
- At least four of the new records from Bold Park in 2011 appear to be undescribed new species, e.g. *Coprinopsis sp. 'peaches & cream', Inocybe sp. 'jarrahae' (Mallocybe), and Inocybe sp. 7: tall, pinkish-pruinose stem* (see discussion).
- Saprotrophic fungi (88 species) were more diverse than mycorrhizal fungi (20) and pathogenic fungi (9) (Table 3). Fungi were present in a wide range of vegetation and microhabitat types. Dead wood with 62 species, and leaf litter with 43 species, had the greatest diversity of fungi (Table 3).

Table 2: Identity and some ecological characteristics of fungal species in Bold Park 2011 (arranged in order of genus, species). **Red = new records of species for Bold Park found during 2011.**

Ecology/Life modes: S = saprotrophic; P = pathogenic; M = mycorrhizal. *Microhabitat types:* A = on animal; B = bark of living tree; L = leaf litter, soil; DT = diseased or dying tree; DW = dead wood; D= on dung/faeces; MB = moss on bark of living tree; MG = moss on ground; U = underground.

Species	Family	Ecology/ Life Mode	Habitat	Woody Plant Association	Exotic / Native	Voucher Code	Veg. Type
1. Agaricus campestris *(formerly listed as A. cf. campestris)*	Agaricaceae	S	L	*E. gomphocephala*	E/N?	BOUGHER00768	1a
2. ***Amanita sp.*** *white, ochre fragile ring, ellipsoid base, sour odour*	Amanitaceae	M	L	*E. gomphocephala*	N	E9468	1b
3. Antrodiella citrea	Coriolaceae	S	DW	*E. marginata*	N	BOUGHER00778	1g
4. Asterostroma persimile	Lachnocladiaceae	S	DW	*Macrozamia*	N	E8076 E8212 E8274 BOUGHER00711	1a, 1b
5. Bisporella citrina *(formerly as Bisporella sp.)*	Helotiaceae	S	L	*E. rudis, E. decipiens, E. gomphocephala, E. marginata*	N	E8108 BOUGHER 00486 00564 E9469	1g
6. Bolbitius vitellinus	Bolbitiaceae	S	L/DW	*E. gomphocephala, woodchips*	N/E?	E6189	1a
7. Boletus sp. *– red brown pileus*	Boletaceae	M	L	*E. gomphocephala, E. decipiens*	N	E6045	5b
8. Bovista cf. apedicellata *(formerly as Bovista sp.)*	Lycoperdaceae	S	L	*E. gomphocephala*	N		1b
9. Byssomerulius corium	Corticiaceae	S	DW	*E. gomphocephala, Melaleuca huegelii*	N	E8277 BOUGHER00714	1a, 5b
10. Calocera guepininoides *(formerly as C. cf. sinensis)*	Dacrymycetaceae	S	DW	*Banksia spp., Pinus*	N	E6124	1a
11. Campanella gregaria	Marasmiaceae	S	DW	*Banksia menziesii*	N	E7434	1a
12. Ceratiomyxa	Ceratiomyxaceae	S	DW	*E. marginata*	N	E8072	1a

Species	Family	Ecology/ Life Mode	Habitat	Woody Plant Association	Exotic / Native	Voucher Code	Veg. Type
fruticulosa *(formerly as C. sp.) (slime mould)*							
13. *Ceriporia tarda*	Phanerochaetaceae	S	DW	*Acacia*	N	E9278	1a
14. *Clavulina sp.* *pale pink*	Clavulinaceae	M	L	*E. marginata, Allocasuarina sp., Xanthorrhoea sp.*	N		1g
15. *Clitocybe semiocculta*	Tricholomataceae	S	DW	*E. gomphocephala, Corymbia calophylla*	N	BOUGHER 00422	1a
16. *Clitocybe sp.1 (1999)* *- pale brown frosty pileus*	Tricholomataceae	S	L	*E. decipiens*	N	E6098	1a
17. *Clitopilus hobsonii* *(formerly listed as Crepidotus sp. tiny white fans, and as Marasmiellus sp. 1)*	Tricholomataceae	S	L	*E. decipiens, E. gomphocephala, Acacia rostellifera, Macrozamia, Pinus*	N	E8066BOUGHER 00531, 00532, 00539 00640, 00735	1a, 1b, 1g, 5b
18. *Collybioid sp.- red-brown cap, hirsute stem, on living tuart*	Tricholomataeae	S	B	*E. gomphocephala*	N	BOUGHER00903	1a
19. *Coprinellus sp.* *smooth brown cap, on soil*	Psathyrellaceae	S	L	*Templetonia*	N		5b
20. *Coprinellus sp.* *tiny, plicate, on soil*	Psathyrellaceae	S	L	*Templetonia*	N		1a
21. *Coprinopsis sp. 'peaches & cream'*	Psathyrellaceae	S	L	*E. decipiens.*	N	BOUGHER00911	1i
22. *Coprinopsis stanglianus* *(formerly as Coprinus aff. picaceus)*	Psathyrellaceae	S	L	*E. gomphocephala, Banksia spp.*	N	E6190 E8211	1a
23. *Cortinarius ochraceofulvus* *(formerly as C. sp. 2 – golden tuart cortinarius)*	Cortinariaceae	M	L	*E. gomphocephala, Banksia spp.*	N		1a
24. *Creopus gelatinosus*	Hypocreaceae	S	DW	*E. gomphocephala, E. marginata, Banksia sp., Macrozamia*	N	BOUGHER 00498 E9206, E9466 BOUGHER00777	1g
25. *Crepidotus eucalyptorum*	Crepidotaceae	S	DW	*E. decipiens, E. gomphocephala E. marginata, E. calophylla, Banksia spp., E. rudis*	N	E6083 E7277 E7149 BOUGHER 00621	1a, 1b, 5b
26. *Crepidotus mollis*	Crepidotaceae	S	DW	*E. marginata, E. calophylla, E. gomphocephala*	N	E6108	1a
27. *Crepidotus nephrodes*	Crepidotaceae	S	DW	*E. gomphocephala, E. marginata, Banksia attenuata, Corymbia calophylla, Dryandra sessilis,*	N	E8020	1a
28. *Crepidotus prostratus*	Crepidotaceae	S	L	*E. gomphocephala*	N	BOUGHER 00533	5b
29. *Dacrymyces stillatus* *(formerly D. sp.)*	Dacrymycetaceae	S	DW	*Banksia*	N		1a, 1b, 5b
30. *Dermocybe clelandii*	Cortinariaceae	M	L	*E. gomphocephala*	N	E8063 E9042 E9433 E9458	1a
31. *Entoloma sp dark depressed cap, cream gills, dull stem*	Entolomataceae	S	L	*E. marginata, E. calophylla*	N		1g
32. *Exidiopsis sp.grey*	Exidiaceae	S	DW	*Acacia rostellifera, E. gomphocephala*	N	E9377	1b
33. *Exidiopsis sp.yellow scabs*	Exidiaceae	S	DW	*E. gomphocephala*	N		5b
34. *Fomitopsis lilacinogilva*	Polyporaceae	S	DW	*E. gomphocephala, E. decipiens, Acacia, Corymbia calophylla, Acacia rostellifera, Melaleuca huegelii*	N	E7227	1a, 1b, 5b
35. *Galerina marginata* *(formerly as Galerina cf. autumnalis - pale on wood*	Cortinariaceae	S	DW	*E. gomphocephala, Macrozamia, Bamksia sp.*	N	E7154 BOUGHER 00676	1g
36. *Galerina sp.*	Cortinariaceae	S	DW/L	*E. marginata, moss*	N		1g
37. *Galerina sp.* *small, chestnut, translucent striate cap*	Cortinariaceae	S	DW/L	*Melaleuca systena, Acacia xanthina, Melaleuca huegelii*	N	BOUGHER00717	5b
38. *Gymnopilus allantopus*	Cortinariaceae	S	DW	*E. gomphocephala, Banksia spp., E. marginata, E. calophylla, Pinus*	N	E6153	1a, 1b, 1g
39. *Harknessia*	Melanconidaceae	S	DW	*E. gomphocephala, E. marginata*	N	E9050 E9442	1a, 1b

Species	Family	Ecology/ Life Mode	Habitat	Woody Plant Association	Exotic / Native	Voucher Code	Veg. Type
uromycoides				*Hardenbergia*			
40. ***Hebeloma crustuliniforme***	Cortinariaceae	M	L	*Pinus pinaster, Pinus radiata*	E	E6095 BOUGHER 00480 E9212	P
41. Hemimycena hirsuta	Tricholomataceae	S	DW	*E. gomphocephala*	N	BOUGHER 00722	5b
42. ***Hemimycena sp.*** *minute, fragile, white pileus, arcuate gills, on wood (formerly listed as Mycena sp. minute, fragile, white pileus, arcuate gills, on wood)*	Tricholomataceae	S	L	*Melaleuca huegelii, Acacia rostellifera, E. decipiens, E. gomphocephala, E. marginata, E. rudis, Macrozamia*	N	BOUGHER 00547	1b,1g, 5b
43. ***Henningsomyces candidus***	Schizophyllaceae	S	DW	*Corymbia calophylla, Banksia menziesi, E. decipiens Acacia, E. marginata*	N	E7267 E8109 E9464	1a, 1g
44. ***Hexagonia vesparia***	Polyporaceae	S	DW	*E. gomphocephala, Banksia spp.*	N	E6821 E7225	1b
45. ***Hjorstamia crassa*** *(formerly as Peniophora sp.)*	Stereaceae	S	B	*E. gomphocephala, E. marginata, E. decipiens*	N	E9046 E9372	1a, 1b, 5b
46. ***Hohenbuehelia bingarra***	Tricholomataceae	S	DW	*Banksia, E. gomphocephala, Banksia attenuata*	N	E9084 BOUGHER 00434 BOUGHER 00529 BOUGHER00759	1a
47. ***Hymenoscyphus sp.*** *cream funnels*	Helotiaceae	S	L	*Veldt grass*	N	E9413 BOUGHER00779	1g
48. ***Hyphodontia arguta***	Schizoporaceae	S	DW	*Banksia littoralis*	N	E8284	1a
49. ***Hypocrea ? sp.*** *(sterile)*	Hypocreaceae	S	DW	*E. gomphocephala*	N	E9443 BOUGHER00764	1a
50. ***Hypocrea sp****. teal green*	Hypocreaceae	S	DW	*E. gomphocephala*	N		1a, 5b
51. ***Hypoxolon sp.*** *compound cushions*	Xylariaceae	S	DW	*E. gomphocephala, Corymbia calophylla, Banksia sp. Melaleuca huegelii*	N	BOUGHER 00448 BOUGHER 00537 E9371	5b
52. ***Inocybe rufuloides*** *(formerly as Inocybe sp. pines)*	Inocybaceae	M	L	*Pinus radiata*	E	BOUGHER 00479 BOUGHER 00541 BOUGHER 00618 BOUGHER00913	P
53. ***Inocybe sp. 1: acaciae in ed****.(formerly as cf. lacera) Referred to as "I. sp. umbonate" in 2011.*	Inocybaceae	M	L	*Acacia rostellifera, Melaleuca preissiana*	N	E6103 E6945 E6946 BOUGHER904 BOUGHER906	5b
54. ***Inocybe sp. 4: densely fibrillose, convex*** *(formerly as sp.b 2008)*	Inocybaceae	M	L	*E. gomphocephala, Acacia rostellifera, Melaleuca preissiana*	N	BOUGHER 00482 BOUGHER00899 BOUGHER00900 BOUGHER00905	5b
55. Inocybe sp. 6: 'jarrahae' (Mallocybe)	Inocybaceae	M	L	*Acacia rostellifera, Melaleuca preissiana*	N	BOUGHR00901	5b
56. Inocybe sp. 7: tall, pinkish-pruinose stem	Inocybaceae	M	L	*Acacia rostellifera, Melaleuca preissiana*	N	BOUGHR00902	5b
57. ***Laccaria lateritia***	Tricholomataceae	M	L	*E. marginata, E. calophylla, E. decipiens, E. gomphocephala*	N	E6069 E9238	1a
58. ***Laetiporus portentosus***	Coriolaceae	P	DT	*E. gomphocephala, E. decipiens*	N	E6085	1a, 1b, 5b
59. ***Lanzia sp.*** *funnel, scurfy stem (formerly listed as Hymenoscyphus sp. 1 brown funnels or as Hymenoscyphus sp.)*	Helotiaceae	S	L	*Banksia attenuata E. decipiens, E. gomphocephala*	N	E8082 E9275 E9393 BOUGHER00716 BOUGHER00742	1a, 1b, 5b
60. ***Lentinellus pulvinulus*** *(formerly as L. hepatotrichus)*	Lentinellaceae	S	B	*E. gomphocephala, Banksia spp*	N	E6200 BOUGHER 00433	1a
61. ***Macrohyporia dictyopora*** *(formerly as Resupinate Undetermined # 2 (2005) – spreading, large-spored)*	Coriolaceae	S	DW	*E. gomphocephala*	N	E8213 BOUGHER00709	1a, 5b

Species	Family	Ecology/ Life Mode	Habitat	Woody Plant Association	Exotic / Native	Voucher Code	Veg. Type
62. Mycena fumosa	Tricholomataceae	S	DW	*E. marginata*	N	BOUGHER 00780	1g
63. Mycena kuurkacea (formerly as Mycena sanguinolenta)	Tricholomataceae	S	L	*E. marginata, E. gomphocephala*	N	BOU354 E6115 E7270 E8031 E9199	1g
64. Mycena nargan	Tricholomataceae	S	DW	*E. decipiens, Banksia littorali, E. rudis*	N	E8019	1a
65. Mycena sp. 1 - dark umbonate pileus, no odour, on wood	Tricholomataceae	S	DW	*E. gomphocephala, E. decipiens Banksia menziesii*	N		1a
66. ***Mycena sp.*** *densly pubescent yellow stem, on wood*	Tricholomataceae	S	DW	*E. gomphocephala*	N	BOUGHER00715	1b, 5b
67. Mycena sp. E – grey dusky pileus, in litter	Tricholomataceae	S	L	*Banksia attenuata, Banksia ilicifolia E. gomphocephala*	N	E6137 E9051	1g
68. ***Mycena sp.*** grey cap, hairy base on wood	Tricholomataceae	S	DW	*E. gomphocephala, E. marginata*	N		1b, 1g
69. Mycena sp. *yellow cap, strigose base, on wood (formerly as Mycena sp. 4)*	Tricholomataceae	S	DW	*E. gomphocephala, E. decipiens Acacia xanthina, Melaleuca huegelii,*	N	E9242	1a, 5b
70. Mycena tenerrima	Tricholomataceae	S	DW	*E. gomphocephala, Macrozamia*	N	E9444 BOUGHER00735	1b, 1g, 5b
71. Omphalotus nidiformis	Paxillaceae	P	DT/DW	*E. gomphocephala, Banksia spp., E. marginata, E. calophylla, E. decipiens, E. rudis, Banksia prionotes, Banksia menziesii*	N	E6135, E6155	5b
72. ***Peniophora cinerea***	Corticiaceae	S	DW	*E. gomphocephala*	N	BOUGHER 00696 BOUGHER00710 BOUGHER00761	1a, 1b, 5b
73. Peniophora sp. cream waxy, white margin (formerly as Resupinate Undetermined # 4 (2005)	Undetermined	S	DW	*Banksia spp., E. gomphocephala*	N	E8247 BOUGHER00718	5b
74. ***Peziza austrogeaster*** (formerly listed as Peziza sp. 1 – tan brown, embedded deeply in sand)	Pezizaceae	S	L	*Banksia spp.,*	N	E6198	5a
75. Phanerochaete sp. blotchy	Meruliaceae	S	DW	*E. gomphocephala*	N	BOUGHER 00739	1b
76. Phellinus sp.	Hymenochaetaceae	P	DT	*E. rudis, Banksia menziesii*	N		1b
77. Phlebia rufa	Meruliaceae	S	B	*E. gomphocephala*	N	E8051 BOUGHER 00655, 00695, 00741	1a, 1b, 5b
78. ***Phlebia sp.*** *pure white*	Meruliaceae	S	B	*Anthocercis sp., E. gomphocephala*	N		1a
79. Phlebia subceracea (formerly Mycoacia subceracea)	Meruliaceae	S	DW	*E. calophylla, Banksia littoralis, E. rudis, Melaleuca huegelii*	N	E8037 E9271 E9271 BOUGHER 00535	1g, 5b
80. Pholiota communis	Strophariaceae	S	L	*E. marginata, Banksia sp.*	N	E9192	1g
81. Piptoporus australiensis	Coriolaceae	P	DT	*E. gomphocephala*	N	E6051	1a, 5b
82. Pisolithus marmoratus	Sclerodermataceae	M	L	*E. decipiens, E. gomphocephala, E. marginata*	N	H7531	1a, 1b
83. ***Plicaria sp. long stipe***	Pezizaceae	S	L	*Acacia rostellifera*	N	BOUGHER00912	5a
84. Pluteus paupercaulis (formerly listed as P. lutescens)	Pluteaceae	S	DW	*E. decipiens, E. gomphocephala Banksia spp*	N	E6107 E9239	1b
85. Poria sp. *white resupinate*	Polyporaceae	S	DW	*E. decipiens, E. rudis, E. gomphocephala, Melaleuca huegelii*	N		1a, 1b, 5b
86. Propolis versicolor	Rhytismataceae	S	DW	*E. rudis*	N		1a
87. Psathyrella candolleana	Psathyrellaceae	S	L	*E. gomphocephala*	N	E6079 E6100 E8017	1a, 1b, 5b
88. Psathyrella sp.chestnut cap, troops	Psathyrellaceae	S	L	*E. calophylla*	N		1a

Species	Family	Ecology/ Life Mode	Habitat	Woody Plant Association	Exotic / Native	Voucher Code	Veg. Type
89. Puccinia myrsiphilli	Pucciniaceae	P	DT*	*Asparagus asparagoides*	**E**	**E9086**	**1a**
90. Pycnoporus coccineus	Coriolaceae	S	DW	*E. gomphocephala, Banksia spp., E. marginata, E. calophylla, E. rudis, Acacia rostellifera*	**N**	**E6109**	**1a**
91. Ramaria gracilis *(formerly as Ramaria cf. stricta)*	Ramariaceae	M	L	*E. gomphocephala, Banksia spp., E. marginata, E. calophylla, E. decipiens*	**N**	**E6077 E6092 E6110 E6150**	**1a, 1g**
92. Resupinate *grey*	Undetermined	S	DW	*E. marginata, E. calophylla*	**N**	**BOUGHER00712**	**1a**
93. ***Resupinate Undetermined sp. c 2007 (and 2011)****grey waxy on base of Jacksonia*	Undetermined	S	DW	*E. marginata*	**N**	**E9087 BOUGHER00708**	**1a**
94. Resupinatus subapplicatus *(formerly as Resupinatus sp.)*	Tricholomataceae	S	DW	*E. marginata, Banksia menziesii, Banksia sp., E. gomphocephala*	**N**	**BOUGHER 00499 E9202 E9209**	**1a, 1g**
95. Rhizopogon roseolus	Rhizopogonaceae	M	U	*Pinus pinaster*	**E**	**H7541**	**P**
96. Rhodocollybia sp.	Tricholomataceae	S	L	*E. gomphocephala*	**N**	**E9045**	**1a**
97. Rickenella fibula	Tricholomataceae	S	MG	*E. marginata, Banksia spp.*	**N**	**E9204**	**1g**
98. Royoporus badius *(formerly listed as Polyporus badius)*	Polyporaceae	S	B / DW	*E. gomphocephala, Banksia spp, E. decipiens, E. rudis*	**N**	**E6068 E6192 E6145 E6160 E8079 BOU353**	**1a, 1b**
99. Schizophyllum commune	Schizophyllaceae	S	DW	*E. gomphocephala*	**N**	**E6136**	**5b**
100. Schizopora paradoxa	Polyporaceae	S	DW	*E. decipiens, E. gomphocephala, E. marginata*	**N**	**E7221 BOUGHER 00625**	**1a, 1b, 1g**
101. Scleroderma cepa	Sclerodermataceae	M	L	*E. rudis, Banksia spp., E. decipiens, Corymbia calophylla*	**N**	**H7560**	**1a**
102. Scleroderma sp.	Sclerodermataceae	M	L	*E. gomphocephala*	**N**		**1a**
103. Sistotrema sp. 2 *grey paint on leaves*	Sistotremaceae	M	L	*E. decipiens, E. gomphocephala*	**N**	**BOUGHER 00563**	**5b**
104. Stemonitis sp.	Slime mould	S	DW	*Banksia sp., Acacia sp.*	**N**		**1a, 5b**
105. Stereum illudens	Stereaceae	S	DW	*E. marginata, E. gomphocephala*	**N**		**1a**
106. Suillus collinitus	Boletaceae	M	L	*Pinus radiata*	**E**	**BOUGHER 00481 E9211**	**P**
107. Tomentella sp. 1 *– rusty on underside of stump*	Thelephoraceae	M/S	DW	*E. decipiens E. marginata*	**N**	**E6974 E9410**	**1a**
108. Tremella cf. globospora	Tremellaceae	P	DW	*Acacia rostellifera*	**N**		**1a, 5b**
109. Tremella mesenterica/aurantia	Tremellaceae	P	DW	*E. calophylla, Banksia spp., E. gomphocephala, Jacksonia sp., Acacia rostellifera,Acacia pulchella, Melaleuca sp.*	**N**	**E6075 E6102 E6123**	**1a, 1b, 5b**
110. Tubulicrinis calothrix	Tubulicrinaceae	S	DW	*Banksia*	**N**	**E9474 BOUGHER 737**	**1b**
111. Undetermined anamorphic fungus on dead millipedes	Undetermined	P	A	*E. gomphocephala*	**N**	**BOUGHER 00703**	**1a**
112. ***Undetermined ascomycete.*** *bright orange on soil*	Undetermined	S	DW	*E. gomphocephala*	**N**	**BOUGHER00767**	**1a**
113. ***Undetermined ascomycete.*** *mouse grey tiny discs, inoperculate*	Undetermined	S	DW	*E. gomphocephala*	**N**	**BOUGHER00738**	**1b**
114. Undetermined resupinate sp. f 2011 *bright tan, white margin*	Undetermined	S	DW	*E. gomphocephala*	**N**	**BOUGHER00707**	**1a**
115. Undetermined resupinate sp. g 2011 kahki, tuberculate	Undetermined	S	DW	*Acacia xanthina*	**N**	**BOUGHER00719**	**5b**
116. Undetermined resupinate sp. h 2011 odontoid patches	Undetermined	S	DW	*Acacia xanthina*	**N**	**BOUGHER00776**	**1g**
117. Volvariella speciosa	Pluteaceae	S	L	*E. marginata, E. calophylla, E. gomphocephala, E. decipiens*	**N/E?**	**E6197**	**1a**

Table 3: Taxonomic rank, life mode, habitat, and vegetation associations of fungi in Bold Park in 2011.
Note: some fungi may have more than one life-mode type, and modes for most have not been confirmed.

Category	No. species	Example species
Taxonomic ranks		
Species	117	-
Genera	80	-
Families	40 *(+ 9 of unknown family)*	
Ecology/Lifemode types		
Saprotrophic	88	*Clitopilus hobsonii*
Pathogenic	9	*Phellinus sp.*
Mycorrhizal	20	*Dermocybe clelandii*
Main habitat types		
leaf litter	43	*Inocybe species*
diseased or dying tree	5	*Piptoporus australiensis*
dead wood	62	*Ceriporia tarda*
bark of living tree	6	*Lentinellus pulvinulus*
moss on ground	1	*Rickenella fibula*
underground	1	*Rhizopogon roseolus*
dung	0	
on animal	1	*Undet. Anamorphic fungus on millipedes*
Vegetation types		
1a	38 exclusive / 28 shared	*Campanella gregaria*
1b	9 / 23	*Tubulicrinis calothrix*
1g	14 / 10	*Mycena fumosa*
1i	1/1	*Coprinopsis sp. 'peaches & cream'*
5a	1 / 1	*Plicaria sp. long stipe*
5b	17 / 22	*Hemimycena hirsuta*
P	4/ 0	*Inocybe rufuloides*
Origin		
Native	110 or 112	*Campanella gregaria*
Exotic	5 or 8	*Hebeloma crustuliniforme*

Discussion

Biodiversity

An estimated total of 479 species of fungi are currently recorded from Bold Park. This includes 18 of the fungi in the current survey considered as new records for Bold Park – 15% of the 117 fungi recorded in 2011.

The identity of some of the species that were listed under other names in previous years have been determined in 2011, such as *Macrohyporia dictyopora* (previously listed as *Resupinate Undetermined # 2 (2005) – spreading, large-spored*), and *Dacrymyces stillatus* (formerly as *D. sp.*).

Some of the new and interesting fungi in 2011:

1. *Inocybe* species (Figures 1 – 4 see on page 2; Figure 9 see below): Five species of the ectomycorrhizal genus *Inocybe* were collected at Bold Park in 2011. The exotic species *Inocybe rufuloides* which was identified for the first time at Bold Park in 2010 (first record for Australia, see Bougher and Matheny 2011) was once again found near pines at Bold Park. This year *I. rufuloides* was observed fruiting in very large numbers in a different location - near the central pine plantation on the bridle trail sand track just south of

Zamia Trail (Figure 9). Many of the fruit bodies had extremely long stems and their caps were barely emergent from the deep sand of the bridle track. The four other species of *Inocybe* collected at Bold Park in 2011 are all undescribed-unnamed species (Figures 1 – 4). They include a species currently referred to as *Inocybe sp. 'jarrahae'* (Figure 1), characterized by having a red-brown felty cap, yellow gills, spermatic odour, and vesiculose cheilocystidia on long hyphae. This species has been observed in several other bushlands around Perth. It appears to be most abundant in calcareous limestone areas with shrub vegetation or tuart woodland, but it can also occur in jarrah forest (where it was first observed, hence the current working name 'jarrahae'). At Bold Park it was found in shrubland vegetation type 5b under *Acacia* and *Melaleuca* in a limestone area on the eastern side of Reabold Hill. To date, a total of 13 species of *Inocybe* have been recorded from Bold Park. Eleven of them are undescribed-unnamed species.

Figure 9: *Inocybe rufuloides* from Bold Park. A species previously unrecorded in Australia.

2. *Hemimycena hirsuta* (Figure 5): This species is entirely white and occurs on rotting wood but is extremely small (e.g. less than 3mm tall) and therefore easily overlooked. It had not been previously recorded in Australia. At Bold Park it was found on rotting wood of tuart near the base of Reabold Hill. *H. hirsuta* is remarkable because it has a mushroom type of fruit body with well-formed stem and cap but does not have any gills under the cap. The surface under the cap is completely smooth but is fertile and produces abundant spores. *Hemimycena crispula* recorded in Western Australia is classified as a similar species to *H. hirsuta* but differs by having well-formed gills (Antonin & Noordeloos 2004).

3. *Mycena fumosa* (Figure 6): This is the third species discovered at Bold Park that belongs to the section Sacchariferae of genus *Mycena*. All three species occur on rotting wood and are diminuitive in size (cap less than 1.5mm diam.). However the other two species - *Mycena judithiana* and *Mycena tenerrima* – are entirely white and more fragile than *M. fumosa* and they tend to shrivel up more rapidly when exposed to open air. *M. fumosa* has a brown cup at the base of its stem.This species is closely related to the more common species *Mycena carmeliana* which is distinguished by having a bright orange cup at the base of its stem (Grgurinovic 2003). The latter species has been observed in several Perth bushlands, but not at Bold Park where it may also be expected to occur. *Mycena fumosa* had not been previously recorded in Western Australia.

4. *Coprinopsis* sp. *"peaches and cream"* (Figure 7): This is an unusual species of the ink cap group of fungi (formerly of the genus *Coprinus*). Most ink cap fungi have white, grey, black or less often brown fruit bodies. However the young fruit bodies of this fungus are enveloped by a dense felty to floccose peach-coloured veil. The veil persists on the mature caps as a white densely fibrillose coat with scattered patches of pastel-peach coloured tissue. Eventually the white fibrils thin out and reveal large areas of the underlying pale tan then grey finely radially striate cap surface. Only a few known species of *Coprinopsis* have such a coloured veil

(Orton & Watling 1979). From the literature, *C.* sp. *"peaches and cream"* seems closest to *Coprinopsis erythrocephala* but that is said to have a "rust to orange-red" veil, which is quite different to the peach (pastel - not bright) colours of the Bold Park fungus. *Coprinus roseotinctus* is said to have a deep rose-coloured 'meal' on the cap and stem but it has a veil of globose cells and it is similar to *C. niveus*. *C.* sp. *"peaches and cream"* may turn out to be an undescribed new species. More collections will help to confirm its status.

5. *Peniophora cinerea* (Figure 8): Once recognized, it has become evident that this species is a very common resupinate (skin or crust) fungus at Kings Park and Bold Park and elsewhere. It is often seen on piles of rotting wood and sticks in natural bushland arreas and in more disturbed garden areas. It is recognizable by its vinaceous colour which tends to fade to clay/kahki or grey as it gets older or dries out. The fruit bodies appear smooth to the eye. Under a hand lens the surface can be seen glistening due to the presence of abundant thick-walled cystidia that are cover with crystals.

Conclusion and recommendations

A total of 479 putative species of fungi have been recorded at Bold Park, and the accumulation of new records each survey year indicates that many more species are likely to occur in the Park. Recommendations include:

- **Surveys:** Surveys of fungi should be continued annually in Bold Park, including with continuing support from staff and volunteers.
- **Data analyses:** The data accumulated since 1999 effectively has produced a large matrix of records of individual fungi species in different vegetation types. There is some indication that different fungal communities occur across the different landscapes and vegetation types at Bold Park, but this premise requires a rigorous assessment. The data for all survey years should be compiled, and then multivariate analyses should be applied to the data to clarify the nature and extent of the various fungal communities at Bold Park.
- **Taxonomic work:** Continued support of DEC's Western Australian Herbarium will be critical to help facilitate taxonomic studies needed to resolve the identity of more of the records of fungi from Bold Park. However to accelerate resolution of the identity of fungi at Bold Park, financial support targeted specifically for taxonomic studies needs to be provided.
- **Training:** Further training of volunteers and staff is needed in order to recognize a greater array of fungi, particularly the less conspicuous types of fungi. This will help provide a more accurate assessment of the numbers of fungi species present at Bold Park.
- **Book:** Some of the fungi recorded so far in Bold Park are depicted in the on-line field book for fungi of the Perth region (Bougher 2009b). However it is recommended that an account of the fungi in Bold Park be produced, such as a colourful field book and/or pamphlets and posters.

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Appendix 1

The subset of fungi that were processed, described, & lodged as herbarium vouchers from Bold Park 2011: Western Australian Herbarium (PERTH), Kensington. PERTH numbers to be assigned.

Genus	*Species*	Code	Descriptive Notes	*Plants*	Date
Agaricus	*campestris*	BOUGHER 00768	Characteristic Features: (i) pale pink, darkening gills; (ii) smooth innately radially fibrillose cap.	*Eucalyptus gomphocephala*	3/07/2011
Antrodiella	*citrea*	BOUGHER 00778	Characteristic Features: (i) bright irridescent mycelium and upper side of fruit bodies; (ii) hymenium of cream to white irregular-shaped pores; (iii) resupinate and forming thin soft undulating bracket-like growths.	*Eucalyptus marginata*	7/07/2011
Asterostroma	*persimile*	BOUGHER 00711	Characteristic Features: (i) pale yellow soft easily removed resupinate growth developing a tuberculate hymenial surface in some parts. Unusual for this species in that there is not a hint of any rosy colouration. Asterosetae confirmed under microscope. Appears to be largely immature.	*Macrozamia*	11/06/2011
Byssomerulius	*corium*	BOUGHER 00756	Characteristic Features: (i) very flat against bark, cream mainly, curled up at edges, shallow wrinkled / labrynthine with magnification on surface. Cream in color. Paler than yellow with darker patches and a more reddish brown. Much whiter when younger. Size: 11 mm x 9 mm; 15 mm x 12 mm; 31 x 12 mm. Under 10 x magnification lightly wrinkled, labrynthine, smoother / flatter margins.	*Eucalyptus gomphocephala*	3/07/2011

Genus	Species	Code	Descriptive Notes	Plants	Date
Byssomerulius	*corium*	BOUGHER 00714	Characteristic Features: (i) series of white splodges with upturned edges; (ii) some edges look like tiny icicles; (iii) surfaces are undulating, some shallow " pores" visible.	*Melaleuca*	16/06/2011
Clitocybe	*semiocculta*	BOUGHER 00766	Characteristic Features: (i) pale small delicate fungus on wood with inrolled cap when young; cap: 9 - 40 mm wide x 14 - 21 mm; flat or slightly indented	*Eucalyptus gomphocephala, Eucalyptus marginata and Macrozamia.*	3/07/2011
Clitopilus	*hobsonii*	BOUGHER 00736	Characteristic Features: (i) size: 1 - 12 mm. Convoluted circular shape. Young fruit body has a very short stem which is eccentric. The stem becomes not noticeable as fruit body enlarges. Edges slightly inrolled. Stem rounded and smooth. Cap velvety.	*Eucalyptus gomphocephala, Macrozamia, Banksia*	23/06/2011
Collybioid	*sp.*	BOUGHER 00903	Characteristic Features: (i) solitary or in caespitose clusters; (ii) very dark red-brown, radially felty pileus which fades paler rapidly as it dries out; (iii) dark grey stipe densely hirsute (short tapering stiff hairs) along entire length; (iv) gills shallow (1mm), pale brown but tending to brighter yellow-orange in some specimens, adnexed.	*Eucalytpus gomphocephala*	1/08/2011
Coprinopsis	*sp. "peaches and cream"*	BOUGHER 00911	Characteristic Features: (i) peach-coloured buttons, and pastel-peach patches on the mature pileus; (ii) pure white densely silky-fibrillose stem without a swollen or differentiated base. This fits the genus Coprinopsis. It seems closest to Coprinopsis erythrocephala (see Ulje's Coprinus site); but that is said to have a "rust to orange-red" veil, which is quite different to the peach (pastel-not bright) colours of BOUGHER 911. Also the veil of BOUGHER 911 tends to break up into discrete patches on the cap as it expands, whereas C. erythrocephala seems (from photos in the literature) to be quite slimy and covers the whole cap? Also, the buttons of BOUGHER 911 are more globose and chunky rather than the cylindrical shape shown for C. erythrocephala. Coprinus roseotinctus is said to have a deep rose-coloured meal on the pileus and stem but it has a veil of globose cells and it is similar to C. niveus. Pileus: (of the mature specimen) 10-13 mm tall x 13-17 mm wide; bluntly conico-campanulate with thin margin eroding from young age; surface at first completely covered by a thick, dense felty to floccose peach-coloured (near Methuen 7A4) coat which transforms into an entirely white densely fibrillose coat with only scattered patches of peach coloured tissue, which mainly persist at the pileus centre at maturity. Also at maturity the white fibrils thin out and reveal large areas of the underlying pale tan becoming grey finely radially striate pileus surface. Coloured scales become more pastel with age (near 7A5). Margin rolls upwards and erodes when the fruit body is maturing. Lamellae: not easily visible on the mature specimens without cutting them in half. Black, crowded, edge glistening. White then cream when young, adnexed, mature edge not conspicuously cystidiate, but densely frosty when very young. Stipe: 30-35 x 4-5 mm; cylindric without swollen or modified base; densely longitudinally silky-fibrillose in button, fibrils more scattered at maturity, no pruinosity seen; entirely white. MICRO: spores ellipsoid, smooth, with broad truncate central germ pore; e.g. 9.5 x 5.7; 9.2 x 5.7; 8.5 x 5.7; 7.8 x 5.6 microns. Veil from youg button (see photos); entirely hyphal and not diverticulate, small clamps present, orange pigment seems intra- wall, but there is also an encrustation on wall. Under stereomicroscope: can see in button cut in half that the young gills do seem to be covered with white arachnoid fibrils. Cheilocystidia scattered singly. No pleurocystidia can be seen. No cystidia on the stem, which has white longitudinal fibrils over entire length. Cheilocystidia: elongate-vesiculate to cylindric-ellipsoid, smooth thin-walled; e.g. 67 x 17; 42 x 18; 69 x 19 microns; with a short pedicel (see photo). Not an entirely sterile gill edge. Note presence of richly-branched (3-6 microns) clamped hyphae on young gill edge, many giving rise directly to young basidia with clamps at base (see photos). Basidia: 4-spored, vesiculose with pedicel e.g. 16 x 7;19.4 x 8.6; not dimorphic? Pleurocystidia scattered singly, elongate cylindric (larger than most of the cheilocystidia), e.g. 91 x 21; 124 x 18; 103 x 20; 112 x 15. Pileipellis: hyphal, clamped hyaline (or orange sometimes) thin-walled hyphae in a cutis (see photo). The encrusted wall hyphae seen in button are are less evident in mature fruit body. But it is an organised cutis when mature, versus a disorganised structure of dissociated hyphal segments in the button (see photos).	*Eucalyptus decipiens*	11/08/2011
Creopus	*gelatinosporus*	BOUGHER 00777	Characteristic Features: (i) yellow gelatinous cushions. A good collection of this now locally well-known species, consisting of more than 20 fruitbodies.	*Macrozamia*	7/07/2011
Crepidotus	*prostratus*	BOUGHER 00713	Characteristic Features: (i) cap 34 - 75 mm diam, irregular wavy, at times split undulating folds, depressed in middle; (ii) colour light hazel when young to orangy-sienna when mature, but paler yellowy sienna toward the edge, surface dry with wriggly lines like veins, margin slightly in-rolled when younger; (iii) gills dark coffee colour tending to be crowded particularly at the edge with short, long and longer lamellae, decurrent and smooth; (iv) stem short (12 - 15 mm), not always centred, 13 - 22 mm wide, irregular hollow chamber in centre of stipe, cream in colour with gills extending to base; (v) no evidence of veil; (vi) flesh bruises a creamy buff colour around edges	*Eucalyptus gomphocephala, Acacia, Melaleuca*	16/06/2011
Dacrymyces	*sp.*	BOUGHER 00720	Characteristic Features: (i) gelatinous; translucent, pale honey-pale gold; a series of small fungi joined. Size: 1-2 mm in diameter. No stem. On dead wood and under bark of dead wood.	*Acacia saligna, Melaleuca, Eucalyptus gomphocephala*	16/06/2011
Galerina	*sp. delicate, brown*	BOUGHER 00717	Characteristic Features: (i) orange brown translucent-striate, thin cap; (ii) thin wiry brown stem; (iii) veil evanescent (only some light brown flecks on cap when button), and sparse whitish cortinoid partial veil in buttons; (iv) subdecurrent gills. This is a small, brown, delicate, translucent-striate species that we have seen and/or collected locally before. Also seen in abundance at Kings Park on 21.6.11 (= BOUGHER 723). Pileus: to 10 mm diam; convex then almost applanate dry bright brown; translucent-striate, smooth, except some light brown to whitish fibrillose veil flecks evident on pileus and at margin when young. Hygrophanous - becoming paler from centre outwards. Stipe: very narrow and up to 30 mm tall; brown (darkest towards base); smooth (no annular zone evident), clotted with whitish mycelium at base. At button stage, there may be cystidia along whole length of the stipe. Lamellae: (pubescence seen under lens in button stage) subdecurrent, similar colour to pileus, margin entire and not fringed. Micro: smooth (use SEM to confirm), hyaline or pale brown ellipsoid (ovoid in face view) spores, e.g.32 x 5.5 microns. Pileipellis a cutis of brown-encrusted hyphae, clamps present. Basidia: 4-spored, with clamps, narrow-long, e.g. 32 x 5.5 microns, hyaline. Pleurocystidia absent. Cheilocystidia lageniform, projecting well beyond hymenium, e.g. 27 x 7; 32 x 5 microns; usually hyaline but some with brown cytoplasm.	*Acacia saligna, Melaleuca preissiana*	16/06/2011
Hemimycena	*hirsuta*	BOUGHER 00722	Characteristic Features: (i) tiny entirely white, fragile, agaricoid fruitbody with narrow stipe adorned with long stiff hairs and without a differentiated base; (ii) pileus surface smooth except for scattered to dense fine hairs especially evident at the margin; (iii) hymenium smooth (no lamellae or folds are present). First record for Australia. H. crispula as recorded from WA is a name	*Eucalyptus gomphocephala, Melaleuca*	16/06/2011

Genus	Species	Code	Descriptive Notes	Plants	Date
			that is synonimised under H. hirsuta in Index Fungorum, but the Antonin & Noordeloos monograph (2004) clearly says that H. crsispula has lamellae and is therefore a different species. This collection consists of a single specimen only. Preserved on a glass slide, after examining under a microscope. The specimen is immature, so has no spores. This is identified as H. hirsuta on the basis of: (a) Pileipellis of hyaline gnarled/knobby basal elements giving rise to attenuated cystidia. (b) Caulocystidia fusiform, tapering, some very long, some with a septum. (c) Hymenial cystidia present. (d) The presence of large clamp connections in abundance. (e) Basidia probably bisporic (only 1 basidium mature enough to have sterigmata was seen, and it was bisporic). See micro photos.		
Hjorstamia	*crassa*	BOUGHER 00757	Characteristic Features: (i) Purple skin fungus. Colour: greyish purple, lighter in patches. Colour 136 - 137, 'Fungi Down Under'. Felty, purple thin mat.	*Eucalyptus gomphocephala*	3/07/2011
Hohenbuehelia	*sp.*	BOUGHER 00769	Characteristic Features: (i) more tan coloured gills than the usual H. bingarra?; cap; dark brown - grey, felty texture. 14 mm wide x 3 - 11 mm); convex shaped or lobed fan shaped; Stipe: almost absent, hairy, short extension of cap; Gills: pale yellow - white densely packed, many lamellulae; fruit bodies scatttered horizontal position; densely covered in hairs, paler at edges; see diagram.	*Banksia, Eucalyptus gomphocephala*	3/07/2011
Hohenbuehelia	*cf. bingara*	BOUGHER 00759	Characteristic Features: (i) brown fans to 200 mm, lighter margins. Gelatinous forms amongst the group. Resupinate. Size: various to 200 mm broad; Shape: 180o broad fans; Colour: sepia to hazel 26 - 27; Consistency: soft with gelatinous sub-layer; Gills: crowded with short, fringing 'sub-gills'.	*Eucalyptus gomphocephala*	3/07/2011
Hymenoscyphus	*sp. cream funnels*	BOUGHER 00779	Characteristic Features: (i) cream, entirely smooth, funnel-shaped fruit bodies seated on mainly grass dead stalks.	*veldt grass*	7/07/2011
Hymenoscyphus	*sp.*	BOUGHER 00716	Characteristic Features: (i) tiny flat buttons on short stems, massed on tuart wood;(ii) cap to 5mm, pale cinnamon colour (10), circular cap slightly darker on edge, older ones have slight depression; (ii) stem to 7 mm, funnel-shaped, darker at attachment.	*Acacia saligna, Melaleuca preissiana*	16/06/2011
Hypocrea	*sp. (brown)*	BOUGHER 00764	Characteristic Features: (i) tiny raised buttons with minute raised bumps; collections of tiny raised buttons up to 5 mm x 3.5 mm across; chocolate brown, with darker tiny raised bumps; others paler brown orange ~ 38 Fungi Down Under, bumps more obvious; maybe same species as E9443?	*Eucalyptus gomphocephala*	3/07/2011
Inocybe	*rufuloides*	BOUGHER 00913	Characteristic Features: (i) finely radially fibrillose, dull brown, conico-campanulate pileus up to 40 mm diam. with a low central umbo; (ii) young gills pallid-avellaneous, with minutely fimbriate edge; (ii) stem very long in some of these specimens (e.g.up to 60 mm) with a sand clod at base; dominantly longitudinally silky-fibrillose entirely but some pruinosity near apex evident in some specimens which are pinkish-brown toward the apex; (iv) rapidly evanescent white cortina present in young button. Note: a few scattered specimens of this species were also present on the other (western) side of the pine plantation along the limestone path where I originally collected this fungus about four years earlier.	*Pinus (nearby)*	19/08/2011
Inocybe	*sp. umbonate*	BOUGHER 00904	Characteristic Features: (i) umbonate, finely fibrillose pileus; (ii) pinkish stipe, pruinose along entire length. Same species as BOUGHER 906? Note in this collection that a young button has whitish fibrils at its pileus margin suggestive of a cortina. However, this button had been separated from its stem by grazing Portuguese millipedes. Micro: abundant metuloids; spores smooth-walled, amygdaliform to suballantoid (see photos).	*Acacia saligna, Templetonia, Melaleuca preissiana, Spyridium, Eucalyptus gomphocephala*	4/08/2011
Inocybe	*sp. convex, densely fibrillose Bold Park*	BOUGHER 00905	Characteristic Features: (i) perfectly convex pileus at maturity (cap does not expand to flat or upturn); (ii) cap surface very densely coarsely radially fibrillose; (iii) stipe pruinose along entire length, pinkish in some (but not all) specimens; (iv) gills quite deep, not ventricose, with minutely fimbriate edge. May be same species as BOUGHER 900? - no, micro is different (see below). Pileus: 20-30 mm diam; convex at maturity (not expanding to applanate or upturning), smooth to densely matted-fibrillose at the centre, elsewhere densely and coarsely radially fibrillose with imbricate bundles of fibrils becoming separate (rimose) only at the extreme margin of the pileus; margin barely decurved, mostly concolorous with pileus or pale at extreme margin (see photos), becoming ragged/split with age; overall colour pale brown (near 6D5) at first (pale due to prominence of pale and silky fibrils whn young), darker brown (near 6F8) when mature. Lamellae: adnexed; to 8 mm deep (i.e. quite deep for cap size); not ventricose; closely spaced; edge minutely fimbriate (under lens) but not distinctly paler than the face; very pale yellowish-brown (near 5B3) when young, then maturing to dull brown (near 6D5); lamellules abundant in 2 or 3 tiers, L (whole cap) = 28. Stipe: 20-35 x 4-5 mm; cylindric or slightly widening towards base but without a swollen or marginate base; solid or with shallow hollow near apex; densely pruinose along entire length; overall colour pinkish brown (near 9D4) but may be faint in some specimens. Flesh: dull in the stipe, white at the stipe base and above the stipe apex in the pileus. Micro: narrow but broad-based metuloids; clamps, spores narrower and more amygdaliform than BOUGHER 900 (more like BOUGHER 899's spores). See photos.	*Acacia saligna, Templetonia, Melaleuca preissiana, Spyridium, Eucalyptus gomphocephala*	4/08/2011
Inocybe	*sp.*	BOUGHER 00906	Characteristic Features: (i) dull brown finely fibrillose pileus with broad low umbo; (ii) stipe pruinose along entire length. Same species as BOUGHER 904? Pileus: 12-25 mm diam.; conicocampanulate then applanate with broad umbo; centrally smooth, elsewhere finely radially fibrillose (most fibrils appressed or innate); dark dull brown (near 8F6) becoming darker when older. Squarrose in one specimen only (as in the photos from the field). Lamellae: loosely adnexed, to 4mm deep; ventricose; closely spaced; edge minutely fimbraite (under lens); Pale yellowish brown (near 6C4) then darker brown (near 6E8); lammellules abundant in 2 tiers. Stipe: 15-25 x 2-5 mm; cylindric with truncate unswollen base; solid; surface pruinose along entire length; dull pinkish brown especially near apex. Flesh: white in pileus and at stipe base; dull straw-coloured in stipe. Micro: metuloids abundant; spores smooth-walled, amygdaliform.	*Acacia saligna, Templetonia, Melaleuca preissiana, Spyridium, Eucalyptus gomphocephala*	4/08/2011
Inocybe	*sp. shaggy Bold Park*	BOUGHER 00899	Characteristic Features: (i) this collection is far too water-soaked to see any fine features such as pruinosity or not on the stipe. However it can be seen that; (a) The pileus is dark brown, centrally squarrose and with imbricate fibres and scales elsewhere; (b) The button appears to have a white cortina, and pale gills, and white stipe. (c) Fimbriate gill edge. Need to check micro features to help ID this collection. Micro: Amygdaliform, smooth-walled spores; abundant metuloids.	*Acacia saligna, Melaleuca preissiana, Eucalyptus gomphocephala*	1/08/2011
Inocybe	*sp. tall, pinkish - pruinose stem*	BOUGHER 00902	Characteristic Features: (i) flat campanulate cap with central umbo and whitish and brown radial fibrils; (ii) stipe pinkish-brown, densely pruinose along entire length and with white fibrils near base; (iii) stately stature of the fruit bodies; (iv) gills loosely adnexed, pinkish-brown. Pileus: 22-26 mm diam.; flat campanulate with blunt-conic umbo; matted-fibrillose at centre, with densely arranged whitish and brown radial fibrils overlying the brown pileus surface; overall colour chestnut brown (near 8F7); margin not splitting. Lamellae: loosely adnexed; to 3 mm deep; ventricose; closely spaced; edge very minutely fimbriate (under lens); pinkish-brown (near 6C4); lamellules abundant	*Acacia saligna, Templetonia, Eucalyptus gomphocephala*	1/08/2011

Genus	Species	Code	Descriptive Notes	Plants	Date
			in two tiers. Stipe: 25-30 x 4-6 mm; cylindric, without swollen or marginate base (none of the 3 specimens show those); surface pruinose (quite densely) along entire length, and with white longitudinal fibrils increasing near the base of the stipe; overall colour pinkish-brown (near 8D5), whitish near base. Flesh: watery in pileus, white at stipe apex, dull in the stipe and white at the base of the stipe. Micro: metuloid pleuros and cheilos; pores smooth-walled, amygdaliform (shorter than those of BOUGHER 905), clamps present.		
Inocybe	*sp. convex densely fibrillose Bold Park*	BOUGHER 00900	Characteristic Features: (i) flat convex, densely fibrillose pileus with strongly and persistently decurved margin; (ii) pale yellowish-brown young gills, dull tan later; (iii) stipe pruinose at least in upper part. May be the same species as BOUGHER 905 (a better collection made elsewhere later)? Pileus: 12-20 mm; convex with strongly decurved margin, becoming flat-convex and not explanding outwards (retaining decurved margin at maturity); surface with smooth centre and densely radially fibrillose elsewhere with some fibrils arranged in imbricate aggregations that are paler than the ground colour of the pileus; overall colour - chestnut-brown (near Methuen 6F6). Lamellae: adnexed, to 5 mm deep (i.e. quite deep for the size); crowded to closekly spaced; edge minutely fimbriate; edge and face dull tan brown (near 6D4) when mature, pale yellow-brown in button (near 5C5); lamellules abundant in 2 or 3 tiers. Stipe: 15-25 x 3-5 mm; cylindric with truncate or tapering unswollen base; surface quite water-soaked and sand-covered but seems to be pruinose at least at the apex. Flesh: water-soaked but paler in pileus and stipe base than in the stipe.. Micro: narrow metuloids and vesiculose paracystidia present; clamps present; spores smooth-walled, broad-amygdaliform-ellipsoid (see photos).	*Acacia saligna and Melaleuca preissiana, with Eucalyptus gomphocephala and Spyridium close by*	1/08/2011
Inocybe (Mallocybe)	*sp. "jarrahae"*	BOUGHER 00901	Characteristic Features: (i) bright red-brown (near 8F6) felty pileus; (ii) yellow (near 3B4) lamellae, adnate; (iii) spermatic odour.	*Acacia saligna, Templetonia, Eucalyptus gomphocephala*	1/08/2011
Lanzia	*sp. funnel, scurfy stem*	BOUGHER 00742	Characteristic Features: (i) dark tan shallow saucer-shaped receptacle up to 1.5 mm diam; (ii) thin, dark, minutely verrucose stalk up to 2 mm tall. No evidence of stromatic tissue either at the base of the stalk, or embedded within the substrate. Micro: see micro photos.	*Eucalyptus gomphocephala*	23/06/2011
Lanzia	*sp. scurfy stem*	BOUGHER 00762	Characteristic Features: (i) brown-stalked cup fungus; (ii) irregular circles - shallow cups to 2.5 mm wide; (iii) stalks darker brown to 1.5 mm height, scurfy; same species as at Kings Park; Cup: brown inside, to 2.5 mm wide, irregular circuloid, darker brown outside, shallow; Stalk: to 1.5 mm, dark brown.	*Eucalyptus gomphocephala, Banksia attenuata*	3/07/2011
Lentinellus	*pulvinulus*	BOUGHER 00760	Characteristic Features: (i) found on tuart branch, rotting; Gills: lamellae - colour white D4 Edinburgh; cap - rusty tawny - Edinburgh; cap margin smooth and overhangs the gills; cap shape - irregular arc; stemless; 30 mm wide; see diagram;	*Eucalyptus gomphocephala*	3/07/2011
Lepiota	*sp.*	BOUGHER 00765	Characteristic Features: (i) stalked mushroom; Cap: scaly, snuff brown, 1.6 cm diameter - slightly raised in centre (17 English fungi colour chart); Gills: fringed, not attached (Apricot -= 47 English fungi colour guide), not crowded; Stem: fine longitudinal striations - even size, bottom 5 mm slightly swollen, length 2 cm, (Apricot - 47 English fungi colour chart).	*Macrozamia*	3/07/2011
Macrohyporia	*dictyoporia*	BOUGHER 00709	Characteristic Features: (i) resupinate, lumpy- undulating growth spreading on burnt wood; (ii) cream with areas of ochre-orange; (iii) forming areas of small circular pores with thick trama in between the pores; (iv) margin of fruit body often uneven with many blunt finger-like extensions. Micro: Broad ovoid, hyaline, thin-walled, smooth pores with 1 large oily inclusion, e.g. 6.9 x 4.5; 6.5 x 5.0; 7.1 x 5.0 microns.	*Eucalyptus gomphocephala*	11/06/2011
Mycena	*fumosa*	BOUGHER 00780	Characteristic Features: (i) pileus 1.5 mm diam, slightly centrally depressed, pale reddish-brown, obscurely translucent-striate; (ii) stipe white, smooth, cylindric, with a densely hirsute mass seated in a broader pale brown cup-like base; (iii) acanthocysts in pileipellis; (iv) cheilocystidia ventricose-rostrate; (v) basidia 4-spored; (vi) spores ellipsoid-oblong (see micro photos). This collection consists of only a single fruitbody. Section Sacchariferae. Unlike other Mycenas (such as M. tenerrima & M. judithiana) of section Sacchariferae that occur locally, this specimen was not quite so fragile and did not shrivel-up almost as soon as exposed from its moist position under the litter. Also unlike the other species, BOUGHER 780 has a shorter and less spindly stipe. The basal disc is not bright orange but more pale brownish (a paler version of the pileus colour). Therefore is does not appear to be M. carmeliana, but rather more closely fits M. fumosa.	*Banksia attenuata, Eucalyptus marginata*	7/07/2011
Mycena	*tenerrima*	BOUGHER 00735	Characteristic Features: (i) very small, cap surface frosty. Stem with fine hairs all the way along it. Base of stem a collar of matted mycelium. Buttons look like they are coated in sugar.	*Macrozamia*	23/06/2011
Mycena	*sp. yellow stem, on wood*	BOUGHER 00715	Characteristic Features: (i) when young lemon yellow stem with hairs at base and pubescent along entire length; (ii) stem darker with age; (iii) cap yellow brown with darker centre; (iv) no odour; (v) bisporic basidia & non-branched cystidia. Pileus: up to 5 mm diam, hemispherical then expanding to flat-campanulate, with obscurely translucent-striate, entire margin; surface dry, smooth (minutely frosty under lens), dull yellowish-brown in button with paler edge, then greenish-brown with darker central area. Stipe: up to 30 x 1.5 mm; cylindric with unswollen base adorned with stiff white hairs; densely pubescent when young (short white 'cystidia?') along entire length; lemon yellow when young, darkening to attain ochre-brown colour with age. Lamellae: adnate to slightly decurrent, to 1 mm deep; thick, edge and face cream unchanging with age; edge smooth, entire; L=6, l=5; Micro: spores narrow ellipsoid, subamygdaliform, hyaline, smooth, e.g. 10.2 x 5.2; 9.6 x 5.6 microns. Stipe with abundant hyaline, smooth, thin-walled caulocystidia, entangled in clusters, mainly cylindric without swollen apex and sinuous (see photos). Cheilocystidia cylindric, ventricose variable, smooth, hyaline to glassy; e.g.35 x 5.5; 41 x 7 microns. Basidia bisporic, monosporic (less often). No clamps seen.	*Eucalyptus gomphocephala, Acacia, Melaleuca*	16/06/2011
Mycena	*nargan*	BOUGHER 00763	Characteristic Features: (i) dark brown convex cap, white spot, Flora British Fungi light brown No 16; Fungi Down Under 128 for gill colour; caps up to 10 mm diameter; stipe lighter version of cap; gills adnexed, smooth margin	*Eucalyptus gomphocephala, Banksia*	3/07/2011
Peniophora	*sp. cream, waxy, white margin*	BOUGHER 00718	Characteristic Features: (i) smooth but partly wrinkled-tuberculate, glistening (under lens) waxy, fully resupinate growth; (ii) firmly attached; (iii) hymenium cream; margin white and less thick. Micro: spores cylindric-ellipsoid, hyaline, smooth-walled, e.g. 6 x 3.1; 6.7 x 3.1 microns (see photos). Not allantoid. Emergent metuloids with brown contents, cylindric with tapering apex, e.g. 60 x 9 microns. Not in layers, mainly at edge of hymenium. Dimitic (skeletals present in context), glassy (not brown). Basidia 4-spored. No clamps seen (but not a thorough look).	*Acacia*	16/06/2011
Peniophora	*cinerea*	BOUGHER 00761	Characteristic Features: (i) grey skin fungus on dead branch; (ii) glistens under hand lens; Flat on bark; Discrete patches from	*Eucalyptus gomphocephala, Banksia attenuata*	3/07/2011

Genus	Species	Code	Descriptive Notes	Plants	Date
Peniophora	*cinerea*	BOUGHER 00710	Characteristic Features: (i) fully resupinate, smooth, glistening (under lens), dull clay/kahki colour. Have collected this species before. Micro: Spores narrow allantoid, smooth hyaline, e.g. 9.4 x 2.7; 8,0 x 3.5; 8.9 x 2.9 microns.Cylindric in face view. Thick-walled lamprocystidia fusoid-ventricose, in multi but not parallel nor crowded layers of the context and barely emerging. No gloeocystidia seen . Lamprocystidia e.g. 39 x 11 microns. Context hyphae hyaline, clamps present. Cystidia near base of context are more plump and round-topped.	*Eucalyptus sp. (probably tuart)*	11/06/2011
Phanerochaete	*sp. cream, dry, blotchy*	BOUGHER 00739	Characteristic Features: (i) patchy growths, fully resupinate; (ii) dry smooth to minutely felty, pale yellow to ochre, thin, not easily removed; (iii) cream, smooth but lower than the rest. Micro: subiculum of loosely intertwined hyaline thin walled hyphae 2 -4 microns wide, septate but no clamps; some broader hyphae (up to 7 microns wide) densely covered with crystals (see photo). Basidia: 4 - spored. Spores: ellipsoid-ovoid, smooth, hyaline, e.g. with suprahylar depression in some spores.	*Eucalyptus gomphocephala*	23/06/2011
Phlebia	*rufa*	BOUGHER 00741	Characteristic Features: (i) velvety, fawn skin fungus on bark. Size: 700 mm x 30 mm. Shape: variable skin, resupinate, approx 1 mm thick. Texture: soft. Firmly attached. Desription: labrynthine, close 'maze' - flat overall surface. Subiculum: yes, paler than labrynth, gelatinous (smooth). Margin: tissue becomes flattish & paler, sharp cut edges.	*Eucalyptus gomphocephala, Macrozamia, Banksia*	23/06/2011
Phlebia	*subceracea*	BOUGHER 00721	Characteristic Features: (i) fully resupinate irregular patches on decorticated wood; (ii) colour orange (48) with lighter margins, flat untoothed margin in some areas; (iii) blunt teeth up to 1 mm long; (iv) patches spread into hollows and holes in wood	*Acacia, Melaleuca*	16/06/2011
Plicaria	*sp. "long stipe"*	BOUGHER 00912	Characteristic Features: (i) shallow to deeply concave cups 15 - 25 mm diam.; upper surface entirely black; lower surface dull greyish-brown smooth or minutely rippled; with substantial cylindric stem up to 15 mm long x 5 mm wide.	*Acacia rostellifera*	11/08/2011
Psathyrella	*sp. ragbag*	BOUGHER 00734	Characteristic Features: (i) Gilled, spots on cap, ragged white edge. Cap: 0.5 to maximum of 3.3 cm. depth 0.2 - 0.4 cm. Shape broad convex expanding to flat when mature. Margin slightly ragged. Gill spacing close and attachment adnexed. Colour bluff (ref; 32 British chart). Gills colour a lighter shade of clay bluff. Stem: length from 1.5 - 7.0 cm, cylindrical, hollow internally, externally silky striated. Width range 0.2 cm to 0.5 cm. Colour creamy white	*Eucalyptus gomphocephala, Banksia attenuata*	23/06/2011
Tubulicrinus	*calothrix*	BOUGHER 00737	Characteristic Features: (i) grey densely farinose surafce glistening under lens (cystidia?) (ii) thin, soft, with undifferentiated margin; (iii) no rhizomorphs. Doesn't match any of the Tubulicrinus species in Cunningham. Keys to T. calothrix in Corticiaceae of Nth Europe and matches well microscopically. But that species is described as whitish to pale yellow or ochraceous - not grey! Micro: Spores narrow, cylindric, small, e.g. 6 x 1.8; 6.2 x 1.8; 6.4 x 1.8 microns, smooth hyaline (glassy-greyish), usually with 2 oil bubbles. Large projecting columnar thick walled metuloids (lyocystidia) with apical crystals. Abundant. Wall thickening is symmetric at the apex. Apex unswollen (see photo) Crystals dissolve in KOH eventually.	*Eucalyptus gomphocephala, Banksia*	23/06/2011
Undetermined Ascomycete	*sp. inoperculate*	BOUGHER 00738	Characteristic Features: (i) cup fungus - very small, grey colour. Cup: 0.5 mm - 1.0 mm wide. Colour: Mouse grey #35 (ref: British chart). Convoluted rim, centre is dimpled slightly concaved. Margin recurved and looks paler due to exposure of paler undersurafces. Stem not visible. Micro: spores cylindric (face view) suballantoid in side view, smooth hyaline, no septa or inclusions, e.g. 11.8 x 4.2; 10.1 x 3.5; 9.8 x 3.4 microns. Asci: inoperculate, cylindric, with 8 non-uniserate spores, e.g. 105 x 6.7 microns. Paraphyses: thin-cylindric (filiform), apex unswollen & unbent, sparsely septate, hyaline in KOH, not projecting. Medullary exicipiculum of dark pigmented globose and angular cells tightly packed. Ectal exicipiculum : a palisade of hymeniform elements (see photos). See diagram on field sheet also.	*Eucalyptus gomphocephala, Banksia attenuata, Macrozamia*	23/06/2011
Undetermined Ascomycete	*sp. inoperculate*	BOUGHER 00743	Characteristic Features: (i) minute (less than 0.5 mm diam); pearly-semitranslucent cream saucers with minutely fringed margin or smooth margin. Micro: Asci cylindric, e.g. 68 x 6.5 microns; spores not uniserate, 8 per ascus, amyloid tip, inoperculate. Paraphyses: narrow cylindric, septate, not projecting beyond the asci, apex unswollen and unbent; e.g. 1.3 microns wide, unbranched; spores fusoid, flat on one side, with a central septum, e.g. 11.3 x 3.6; 12.2 x 3.0; No gelatinised tissue seen.	*Banksia attenuata*	23/06/2011
Undetermined Ascomycete	*sp.*	BOUGHER 00767	Characteristic Features: (i) cups: 1 mm - 5 mm - flesh thick (1 mm) - inrolled edges when young - body flattening with maturity; Colour apricot (47 - British Fungi colour chart.)	*Eucalyptus gomphocephala, Corymbia calophylla*	3/07/2011
Undetermined resupinate	*sp. kahki tuberculate*	BOUGHER 00719	Characteristic Features: (i) kahki waxy, tuberculate (low round-topped warts), fully resupinate; (ii) firmly attached; (iii) margin not differentiated; (iv) rhizomorphs absent. Micro: spores ellipsoid, hyaline, smooth, e.g. 6 x 4.1; 5.5 x 3.7 microns. No cystidia. Basidia 4-spored.	*Acacia*	16/06/2011
Undetermined resupinate	*sp. grey*	BOUGHER 00708	Characteristic Features: (i) smoky grey, smooth, waxy fully resupinate; (ii) margin not differentiated. Micro: Spores hyaline, smooth, ellipsoid, e.g. 7.9 x 4.6; 6.6 x 3.7; 7.1 x 3.8 microns. Cystidia e.g.78 x 9 microns, scattered singly, hyaline, slightly thick walled. Clamps present. Subiculum of hyaline, clamped, thin-walled hyphae. Monomitic. Basidia quadrisporic.	*Eucalyptus gomphocephala*	11/06/2011
Undetermined resupinate	*sp. bright tan*	BOUGHER 00707	Characteristic Features: (i) Fully resupinate, firmly attached spreading growth; (ii) hymenial surface bright tan (6C7 to 6D7), smooth, minutely glistening (cystidia?) under lens; (iii) margin white to pale cream, fibrillose - cottony but appressed. Micro; Subiculum of loosely entwined, hyaline to glassy, clamped, thin walled (mainly) hyphae (see photo). Spores hyaline, smooth, ellipsoid, e.g. 8.7 x 4.5; 6.3 x 4.1 microns. No cystidia. Monomitic.	*Jacksonia furcellata*	11/06/2011
Undetermined resupinate	*sp. pored*	BOUGHER 00740	Characteristic Features: (i) Pored skin-like fungus; pores obvious without a lens. Irregular, spreading across dead tuart wood. Skin type. Thickness only 1 mm. Consistency overall tough and firmly attached to dead wood, with a dry surface. Hymenium with a creamy colour 4D (ref: British chart). Surface texture pored, obvious without lens. Pores irregular in shape - numbers vary from 1 to 4 pores per mm. Subiculum: present and very thin. Colour of subiculum is slightly darker cream to the top of pores. Margin of the skin is smooth and form is resupinate. No rhizomorphs.	*Eucalyptus gomophocephala, Banksia attenuata, Macrozamia*	23/06/2011
Undetermined stromatic ascomycete	*sp.*	BOUGHER 00758	Characteristic Features: (i) pimpled upper surface; (ii) dark colour; (iii) flat disc; 1 only. Cap: 3 mm in diameter - fuscous black (British Fungi Colour Chart No 36), covered with tiny pimples. Lower surface margin same colour as top but smooth with paler centre; attached to dead Banksia wood. 1.5 mm thick - one fruit body seen only.	*Banksia menziesii*	3/07/2011
Undetermined toothed resupinate	*sp.*	BOUGHER 00776	Characteristic Features: (i) small patches resupinate, pale orange-tan odontoid projections, surrounded by a rather broad smooth white margin.	*Macrozamia*	7/07/2011