

FNCV FUNGI GROUP FORAY 7 June 2009

Foray to Greens Bush (via Devils Bend Reservoir)
Baldry Crossing, Greens Bush, Mornington Peninsula National Park
GPS reading at carpark: 38 degrees 25' 20" S 144 degrees 57' 33" E

When do you find mushrooms? This very simple question does not have a simple answer. One of the most exciting things about searching for fungi is their unpredictability. We might also ask: Is there really a 'fungi season'? Do some fungi species have earlier or later seasons? Are other factors more important than season? Should we be matching recent rainfall to findings? When we revisit our favourite sites at different times during the year we have an opportunity to start to build a picture of what fungi fruit when.

This was our second foray to Greens Bush this year (the last one being on 26 April) and it was interesting to note that we found many more species this time (94 species compared to 47 last time). On our April foray nearly a third of the finds (15 species) were growing on wood. This time, we found about the same number of species (13) on wood. However, many more of the June species (87% or 81 species) were found growing on the ground in soil or leaf litter. This suggests that the 'season' (particularly for the mycorrhizal fungi) had only just started in April, but was in full swing by June. We might also conclude that the saprophytic and parasitic fungi appear to be less seasonal and also longer lasting.

Only 14 species found in June were the same as we found in April. The species included *Agaricus* sp., *Amanita* aff. *armeniaca*, *Boletus* sp., *Coltricia cinnamomea*, *Fistulinella mollis*, *Hypholoma fasciculare*, *Lactarius eucalypti*, *Lichenomphalia* sp., *Mycena cystidiosa*, *M. fumosa*, *M. viscidocruenta*, *Rickenella fibula* and *Russula purpureoflava*. With the exception of *Amanita* aff. *armeniaca*, which we have found only at this site, these species are fairly common in most locations. The species which we didn't find in June included *Amanita grisella* sp., *Boletus* sp., *Boletellus* sp., *Hebeloma* sp. and *Leucocoprinus* sp. Perhaps these latter species could be described as 'early fruiting'.

So what can we say of the 80 different species we found this time?

Cortinarius species (including *Dermocybe*) were much more plentiful (we only found 3 species last time). However, we were unable to identify 11 of the 16 species found. This is typical of our understanding of *Cortinarius* – there are just so many with undistinguished features.

Seven species of *Entoloma* were found (cf. four last time), including the distinctive *E. moongum*, *E. viridomarginata* and *E. panniculum*. That latter has a deep blue conical cap and the stipe is deep blue, paler towards the cap and flecked with white fibrils. This specimen keyed out easily to *E. panniculum* from Noordeloos & Gates (2009) 'Provisional Key to the *Entoloma* species of Tasmania'. However, Virgil's spore measurements are somewhat smaller than specified by Horak (1980). We also noted that in a number of our specimens the stipe is noticeably paler towards the top – a character we couldn't find described elsewhere. So perhaps this is yet another *Entoloma* species – this genus seems to grow by the day!

Only two *Hygrocybe* spp. (*H. lewellinae* and *H. graminicolor*) were found, which is unusually few for this location, but then we didn't find any in April.

Russula spp. were more common – six species found including one from the *R. neerimea* group, which is distinctive for its dull orange/caramel cap and stipe and deeply grooved margin on the cap. No smell was detected, but they are variously reported to smell either sweet or foul! Six species of *Mycena* were found, compared to four in April.

We might suggest that *Cortinarius*, *Russula*, *Entoloma*, *Hygrocybe* and *Mycena* could be described as 'late fruiting' genera. This is a very simplistic analysis, but it shows that there is a lot more that we can learn more about the seasonality of the fruiting of fungi. We should treat these 'conclusions' as hypotheses for future testing as we build up our collection of foray reports. Fungimap is developing a database of the geographical distribution and phenology of the 105 target species. Our observations can help to fill in the data for non-target species as well.

Nine Fungimap target species were found.

Thanks to Sue McLean for taking the field notes and to Virgil Hubregtse for the microscopical analyses of some of the specimens.

Paul George

Baldry Crossing is located in Greens Bush, Mornington Peninsula National Park.

Vegetation: heathy eucalypt forest

GPS reading: 38 degrees 25 minutes 20 seconds S 144 degrees 57 minutes 33 seconds E

In the morning we walked up the loop some way and back, nos 1-53

After lunch we started on the loop down hill at the creek and walked all around in the opposite direction, nos 53-98

No = sequential numbering of species as they were found (note - where there is a gap in the numbering, a species was recorded x2)

S = specimens taken for further examination or **C** = collection taken for MEL; **T** = Fungimap Target species; **coll** =

() brackets in substrate column = substrate not observed by recorder – probable substrate suggested

See *The Fungi CD (2008 edition now available)* = FNCV Fungi CD with 240 species and over 1100 images

See **CD 05** = FNCV Fungi Group CD of species recognisable in the field; illustrates 112 species with over 450 photos.

See *Fungi Down Under p. #* = *Fungi Down Under: the Fungimap guide to Australian fungi* / by Pat Grey and Ed Grey. 2005, images and descriptions of 100 Fungimap Target Species (T)

See **Fuhrer p. #** = *A field guide to Australian fungi* / by Bruce Fuhrer. 2005, many of the species are also described here

See **McCann p. #** = *Australian fungi illustrated* / by I.R. McCann. 2003, images of many species

Species found on the loop walk, Baldry Crossing, Greens Bush.

No	S	T	Type	Species	Description	Substrate
37			Gills	<i>Agaricus sp.</i>	Very dark brown fibrils on cap. Ring half way down the white stipe	soil
55			Gills	<i>Agaricus sp.</i>	Cape large. cream coloured with a few brown specks near the centre	soil
74			gills	<i>Agaricus sp.</i>	Cap texture like kid skin. Slightly fawn in centre, fading to edge. No distinctive scales.	soil
10			Gills	<i>Amanita aff. armeniaca</i>		soil
2			Gills	<i>Amanita sp.</i>	Brown cap, white dots	soil
80		T	gills	<i>Amanita xanthocephala</i>	Fungi Down Under p 21, Fuhrer p 27	soil
38			Pores	<i>Antrodiella citrea</i>	Fuhrer p 247	wood
79			forked gills	<i>Austropaxillus infundibuliformis</i>	Fuhrer p 181	litter
72			pores	<i>Boletus sp.</i>	Dark reddish stipe on top. Underneath largely eaten out. Tubes yellow with red outer surface. Tunes free of stipe. Stains blue	soil
51			jelly	<i>Calocera sinensis</i>	Fuhrer p 290	wood

No	S	T	Type	Species	Description	Substrate
62			Slime mould	<i>Ceratiomyxa fruticulosa</i>	Fuhrer p 344	litter
33			Disc	<i>Cheilymenia raripila</i>	Fuhrer p 305	herbivore dung
56			coral	<i>Clavulina sp.</i>	Individual pale grey, upright fruiting bodies to 80mm scattered through vegetation on bank. Very fragile.	
92	17		coral	<i>Clavulina sp.</i>	Soft grey colour with white spores. 90mmx30mmx30mm From VH: fruit-body smoky grey, many-branched, covered in a light grey mealy substance SPORES c.10-14 x 9-10 microns, sub-globose, smooth, hyaline BASIDIA c.65 x 10 microns, 2-spored, clavate STERIGMATA c.5 microns long	soil
73	8		gills	<i>Clitocybe sp.</i>	Decurrent white gills. Cap has dark centre paler edge. Dark stipe. From VH: CAP diameter 38 mm, planate with deeply depressed centre (could probably be described as infundibuliform) and downcurved margin, yellowish grey-brown, darker in centre, hygrophanous, striate only at very edge of margin. GILLS decurrent, crowded, pale creamy colour; 3 lamellulae between gills STIPE 30 x 5.5 mm, laterally flattened, twisted, generally concolorous with cap, but darker brown in middle area; hollow FLESH thin, light yellowish grey-brown ODOUR farinaceous? SPORE PRINT not obtained SPORES c.5.5-6 x 3-3.5 microns, smooth BASIDIA c.25-30 x 6 microns, slender, clavate STERIGMATA c.3 microns long	soil
78			spines	<i>Coltricia cinnamomea</i>	Fuhrer p 249	soil
3		T	Vegetable caterpillar	<i>Cordyceps gunnii</i>	Fungi Down Under p 104, Fuhrer p 311	caterpillar/soil
95		T	gills	<i>Cortinarius archeri</i>	Fuhrer p 44	soil
29			Gills	<i>Cortinarius fibrillosus</i>	cf. Fuhrer p. 99 as <i>Inocybe austrofibrillosa</i>	soil
90			gills	<i>Cortinarius sinapicolor</i>	Fuhrer p 49	soil
6			Gills	<i>Cortinarius sp.</i>	Brown	soil
13			Gills	<i>Cortinarius sp.</i>	Cap centre tan changing to almost white at the edge. Stipe satiny white on outside, hollow and brown inside. Base of stipe covered with white basal mycelium and slightly swollen. Cap slimy when wet. Cluster.	soil
17			Gills	<i>Cortinarius sp.</i>	Grey/blue cap, smaller one dark blue - maybe the upper one drier and hygrophanous. Gills rusty brown. Stipe faintly blue.	soil
19			Gills	<i>Cortinarius sp.</i>	Biscuit-yellow cap. Lilac stem.	soil
23	1, 2 V r g i l		Gills	<i>Cortinarius sp.</i>	Cap greyish mauve/lilac. Cap slimy when wet. Gregarious. From VH: Caespitose on soil near <i>Xanthorrhoea australis</i> . CAP diameter 21 mm, convex with shallow umbo, greyish lavender but brown in centre, very fibrillose GILLS sinuate, close, greyish lavender; 5 lamellulae between gills STIPE 42-50 x 3 mm, widens toward base, central, greyish lavender, very fibrillose, hollow; remains of cortina on stipe have bright yellow-brown spores caught in them. FLESH creamy coloured, firm ODOUR mushroomy SPORE PRINT not obtained SPORES c.7 x 5 microns, ornamented BASIDIA c.23 x 7 microns, 4-spored, clavate STERIGMATA c. 3 microns long	soil/ leaf litter
26			Gills	<i>Cortinarius sp.</i>	Cap dark brown	soil
34	3		Gills	<i>Cortinarius sp.</i>	Hygrophanous, very pale with brown margin. From VH: 'zoned cap' ('zoned' in this case refers	soil

No	S	T	Type	Species	Description	Substrate
					to colour, not texture) White stipe with lavender tint at top. CAP diameter 30 mm +, convex with a tendency to have a broad umbo, pale at margin, then light brown, and yellow-brown in centre; smooth; hygrophanous; edge of margin tends to curl upward as the fruit-body dries out GILLS adnexed, close, bright yellow-brown; 3 lamellulae between gills STIPE 52 x 4 mm, widens toward base, central, curvy, longitudinally fibrillose, solid, remains of cortina have bright yellow-brown spores caught in them; white mycelium present at base of stipe. FLESH Creamy-coloured, firm, 5 mm thick over top of stipe ODOUR mushroomy SPORE PRINT yellow-brown SPORES c.8-10 x 4.5-5 microns, ornamented BASIDIA c.23-28 x 7 microns, 4-spored, clavate STERIGMATA c. 4 microns long	
47	6		gills	<i>Cortinarius sp.</i>	From VH: 'gingery brown, papillate' CAP diameter 24-42 mm, convex with a conical central umbo, light tan with a darker umbo, densely fibrillose, margin tends to be crenulate GILLS adnexed, sub-distant to distant, gingery brown, 10 mm deep in older specimen; 1 lamellula between gills STIPE 46 x 3 mm (second specimen 70 x 4 mm), cylindrical, central, hollow, longitudinally fibrillose, creamy brown; white mycelium at base FLESH not found ODOUR none SPORE PRINT not obtained SPORES c. 11 x 6 microns, minutely warty, ellipsoid BASIDIA c. 30 x 8 microns, 4-spored, clavate STERIGMATA c. 4 microns long	Mossy area
86			gills	<i>Cortinarius sp.</i>	Cap yellow with brown scales in centre. Undulating surface. Side view looks shows the gills as though edge was turned up. Pale stipe	soil
48	7		gills	<i>Cortinarius subgenus Myxacium</i>	Slimy white cap, slimy white stipe below cortina. From VH: CAP diameter 22 mm, convex, sticky, creamy coloured, margin has some radial splits GILLS adnexed, close, pale yellowish brown STIPE 50 x3 mm, cylindrical, central, white, fibrillose, curved at base, solid; yellow-brown spores caught in remains of cortina on the stipe FLESH translucent gingery brown, soft, watery ODOUR none SPORE PRINT yellow-brown SPORES c.9-10 x 5-6 microns, very minutely ornamented (almost smooth) BASIDIA c.34-38 x 7-8 microns, 4-spored, clavate STERIGMATA c.4 microns long CLAMP CONNECTIONS PRESENT	soil
44			gills	<i>Crepidotus sp.</i>	Slightly brown centre of gills from spores. Tiny attachment	wood
24		T	Gills	<i>Dermocybe austroveneta</i>	Fungi Down Under p 34, Fuhrer p 59	soil
89			gills	<i>Dermocybe erythrocephala</i>	Red cap with dark red umbo, red gills. Red stipe. Cap diam 25mm	soil
98	10		gills	<i>Dermocybe sp. 'small red'</i>	From VH: CAP diameter 16 mm, umbonate, red with brown margin and darker umbo, finely fibrillose, dry GILLS adnexed (look adnate but are not attached all the way), close to sub-distant, gingery brown; 3 lamellulae between gills STIPE 41 x 2 mm, widens slightly at base, central, red-orange, fibrillose, curvy FLESH creamy colour, not much of it ODOUR none SPORE PRINT not obtained SPORES c.7 x 5 microns, minutely warty BASIDIA c.24-32 x 5-6 microns, 4-spored, slender STERIGMATA c.4 microns long	soil
4			Gills	<i>Descolea recedens</i>	Fuhrer p 64	
28			Disc	<i>Discinella terrestris</i>	Fuhrer p 315	soil
81			gills	<i>Entoloma aff. moongum</i>	Cap diameter 40mm, stipe 50mmx4mm. Cap hygrophanous, dark, striated from dimple. Stipe darker. Gills pinkish. Fuhrer p 65	soil

No	S	T	Type	Species	Description	Substrate
42	5		gills	<i>Entoloma moongum</i>	Dark black cap. Stipe with white basal mycelium. Fuhrer p 65 From VH: This is probably E. moongum, but Cheryl Grgurinovic, who named this species, says the cap is up to 19 mm across, and the stipe is up to 32 mm long. This specimen was growing on a tree trunk, not on the ground. Nearby specimens on the ground had a smaller stature. CAP diameter 30 mm, planate with small central depression, almost black, very finely fibrillose (x10); margin down curved. GILLS adnexed, sub-distant, creamy white with a pinkish tinge developing as spores mature STIPE 90 x 4 mm, widens toward base, flattened from one third of the way down, almost black, with white mycelium at base, smooth, hollow FLESH not found ODOUR mushroomy SPORE PRINT pink SPORES c.10-11 x 7-8 microns, angular BASIDIA c.38-40 x 12 microns, 4-spored, clavate STERIGMATA c. 5-6 microns long	soil; one on a tree trunk
97	16		gills	<i>Entoloma panniculum</i>	Deep blue cap and stipe. Fibrillose stipe with white flecks, lighter at the top. From VH: CAP diameter 19 mm, convex, dark blue, fairly smooth GILLS adnexed, sub-distant, creamy white; 3 lamellulae between gills STIPE 30 x 5 mm, widens toward base; blue but pale at top, longitudinally fibrillose FLESH not found ODOUR none SPORE PRINT not obtained SPORES c. 7 x 6 microns, angular (5 angles) BASIDIA c.3-45 x 8 microns, 4-spored, clavate STERIGMATA c.3 microns long. From PG: This keys out to E. panniculum from Noordeloos & Gates (2009) 'Provisional Key to the Entoloma species of Tasmania'. However Virgil's spore measurements are smaller than Horak (1980) - 9.5 - 12 * 7 - 8 microns.	soil
25			Gills	<i>Entoloma sp.</i>	Cap with dark, dimpled centre, mauve brown edge with striations. Diameter 15mm. Stipe 72mm, darkish brown becoming white at base. Basal mycelium. Gills white with a faint tinge of colour.	soil
35	P at		Gills	<i>Entoloma sp.</i>	White cap, white stipe	soil
85	12		gills	<i>Entoloma sp.</i> 'light brown cap'	Fawn cap with dark dimple. Stipe dark. From VH: CAP diameter 27 mm, upturned, striate, light brown, hygrophanous GILLS adnexed, pale pink STIPE 50 x 2 mm, smooth, cylindrical, central, greenish brown, darker toward base, hollow FLESH not found ODOUR none SPORE PRINT pink SPORES c.6-8 x 7 microns, angular (6 angles) BASIDIA c.30-32 x 8-10 microns, 4-spored, clavate STERIGMATA c.3 mm long	soil
43			gills	<i>Entoloma viridomarginatum</i>	Fuhrer p 67	soil
9			Pores	<i>Fistulinella mollis</i>	Fuhrer p 191	soil
50			gills	<i>Galerina aff. hypnorum group</i>		wood
67			Earth star	<i>Geastrum sp.</i>		soil
22			Gills	<i>Gymnopilus allantopus</i>	Distinctive white 'stitching' around cap margin. Fuhrer p 72	wood
82			gills	<i>Gymnopilus sp.</i>	Small cap, diam 20mm	log
70			jelly	<i>Heterotextus peziziformis group</i>	cf. Fuhrer p. 291 <i>H. miltinus</i>	wood
88			spines	<i>Hydnum repandum</i>	Fuhrer p 242	wood
64			gills	<i>Hygrocybe graminicolor</i>	Fuhrer p 85	moss

No	S	T	Type	Species	Description	Substrate
27		T	Gills	<i>Hygrocybe lewellinae</i>	Fungi Down Under p 41, Fuhrer p 87	Mossy area
71			gills	<i>Hypholoma fasciculare</i>	Fuhrer p 96	soil
69			ostioles	<i>Hypocrea victoriensis</i>	cf. <i>H. sulphurea</i> Fuhrer p.320	wood
45			gills	<i>Inocybe sp.</i>	Cap tan/brown with dark nipple in centre. Almost no flesh in cap. Stipe white, hairy, brown inside.	soil
40	4		gills	<i>Laccaria sp.</i>	From VH: 'very pale pink gills' CAP diameter 19 mm, convex, centrally depressed; very finely fibrillose, hygrophanous; the fruit-body has dried out to a beige colour with a slightly darker centre, but is pale pink at the margin GILLS adnexed, close, VERY pale pink; 7 lamellulae between gills STIPE c.60 x 2 mm, cylindrical but slightly flattened in places, slightly darker beige than cap, longitudinally fibrillose, hollow FLESH not found ODOUR none SPORE PRINT white SPORES c.6 x 6 microns, globose, spiny, hyaline BASIDIA c.30-43 x 9 microns, 4-spored, clavate STERIGMATA c.5 microns long	soil/litter
65			gills	<i>Laccaria sp.</i>	Pink gills dark stipe.	soil
8			Gills	<i>Lactarius eucalypti</i>	Fuhrer p 104	soil
20			Gills	<i>Lepiota haemorrhagica</i>	Fuhrer p 109	soil
60	9		gills	<i>Lepiota sp.</i>	Cap brown with orange droplets around edge and down the stipe. Fibres radiating from centre of cap to the pale margin. Cf. Fuhrer p 110. From VH: Cap and stipe covered with yellow-orange water droplets CAP diameter 17 mm, convex, creamy with yellow-brown centre, scaly; margin darkens and separates from gills as cap dries out GILLS free, close to crowded, creamy white STIPE 70 x 2 mm at top, widening to 4 mm at base, central, hollow, creamy white at top, pale brownish below annulus. Annulus fibrillose, upward facing, darkens as it dries out. FLESH creamy white, very thin, firm ODOUR none SPORE PRINT not obtained SPORES c.7-9 x 4-5 microns, smooth BASIDIA c.30-38 x 7-8 microns STERIGMATA c. 4 microns long	soil
5		T	Gills	<i>Lepista nuda</i>	Fungi Down Under p 42, Fuhrer p 111	soil
93			gills	<i>Lichenomphalia sp.</i>	Orange, fading towards palish yellow.	soil
59			gills	<i>Marasmius crinisequi group</i>		soil
31		T	Gill	<i>Marasmius elegans</i>	Fungi Down Under p 44, Fuhrer p 122	soil
46			gills	<i>Marasmius sp.</i>	Large brown cap (diam 20mm) paler at the edge. Two toned stipe.	Mossy area
57			gills	<i>Melanotus hepatochrous</i>		bark
21			Slime mould	<i>Minute white spheres</i>	Immature, transforming plasmodium	litter
39			Gills	<i>Mycena albidofusca</i>	Fuhrer p 126	litter
15			Gills	<i>Mycena austrororida</i>	Fuhrer p 129	litter
18			Gills	<i>Mycena cystidiosa</i>	Fuhrer p 131	litter
49			gills	<i>Mycena fumosa</i>		litter
77			gills	<i>Mycena subgalericulata</i>	Fuhrer p 141	litter
68		T	gills	<i>Mycena viscidocruenta</i>	Fungi Down Under p 50, Fuhrer p 143	litter

No	S	T	Type	Species	Description	Substrate
87		T	gills	<i>Podoserpula pusio</i>	Fungi Down Under p 61, Fuhrer p 282	wood
41			gills	<i>Psathyrella aff. pennata</i>	Fuhrer p 164	soil
11			Gills	<i>Psathyrella sp.</i>		soil
36			Gills	<i>Psilocybe subaeruginosa</i>	Fuhrer p 164	soil
96			coral	<i>Ramaria lorithamnus</i>		soil
52			coral	<i>Ramaria sp.</i>	Pink/mauve branched	soil
16			Gills	<i>Rhodocollybia butyracea</i>	Fuhrer p 36	soil
63			gills	<i>Rickenella fibula</i>	Fuhrer p 166	moss
84			gills	<i>Russula aff. rosacea</i>	Fuhrer p 172	soil
91			gills	<i>Russula flocktoniae</i>	Fuhrer p 169	soil
83			gills	<i>Russula neerimea group</i>	Caramel coloured cap with deeply grooved margin. No odour detected. Tasted somewhat rank.	soil
14			Gills	<i>Russula persanguinea</i>	Fuhrer p170	soil
7			Gills	<i>Russula purpureoflava</i>	Fuhrer p 170	soil
1			Gills	<i>Russula sp.</i>	Green/ black around margin of cap.	soil
76			star	<i>Scleroderma aff. cepa</i>	Yellow	soil
75			star	<i>Scleroderma sp.</i>	Light brown	soil
32			Gills	<i>Stropharia semiglobata</i>	Fuhrer p 174	herbivore dung
54			discs	<i>Torrendiella eucalypti</i>		acacia leaf
94			gills	<i>Tricholoma sp.</i>	Sturdy white gills; white stipe. Cap greyish with white edge. Surface has feel of a chamois. Cap diam 55m. Stipe 40mm x10mm	soil
66			discs		Very pale 1-2mm diam.	stump