

APPENDIX A: Gippsland stratification and survey intensity analysis - flora

STRATA WITH HIGH SAMPLING INTENSITY (>40 sites per 10,000ha)

Stratum No.	mean ann. precip.	min. temp. coldest month	max. temp. warmest month	lithology*	# spp	# sites	probability next species new (%)	forest area (ha)	% of forest in Gippsland	# polygons	site density (sites per 10,000 ha)	distribution (geographic units)
86	moderate	high	high	2	1149	366	3	47,506	3.01	345	77.04	Mullungdung Coastal, Wilsons Promontory, Latrobe Valley
18	high	low	low	8	894	365	2	38,123	2.41	294	95.74	Wellington Mountains, Upper Murray Mountains, Cobungra Mountains, Dargo Mountains
78	moderate	high	high	5	823	142	5	33,027	2.091	994	43	Mullungdung Coastal, Latrobe Foothills, Taylor Foothills, Strzelecki Foothills, Latrobe Valley
81	moderate	high	high	3	644	123	5	19,609	1.24	323	62.73	Mullungdung Coastal, Strzelecki Foothills, Taylor Foothills
95	high	high	high	6	606	58	13	10,103	0.64	40	57.41	Wilsons Promontory
99	high	high	moderate	6	456	47	17	9,360	0.59	92	50.21	Wilsons Promontory
82	moderate	high	high	4	463	58	10	7,558	0.48	783	76.74	Latrobe Valley, Strzelecki Foothills, West Gippsland Foothills, Mullungdung Coastal,
36	high	low	low	9	469	47	9	4,423	0.28	63	106.25	Dargo Mountains, Wellington Mountains, Cobungra Mountains
100	high	high	moderate	2	580	76	8	3,007	0.19	29	252.78	Wilsons Promontory
77	low	high	v.high	4	280	20	14	2,946	0.19	487	67.88	King Coastal Plains, Avon Foothills, Wellington Coastal Plains
72	moderate	high	high	6	399	33	22	2,800	0.18	117	117.87	Wilsons Promontory
79	low	high	v.high	2	223	29	23	2,323	0.15	120	124.84	Wellington Coastal Plains, King Coastal Plains
98	high	high	high	2	207	21	16	1,983	0.13	67	105.92	Wilsons Promontory, Fish Creek Coastal
96	moderate	high	moderate	6	130	10	59	1,699	0.11	77	58.86	Wilsons Promontory

97	moderate	high	moderate	2	199	9	58	726	0.05	21	124.05	Wilson's Promontory
Total								185,193	11.74			

NOTE: Asterisks in "probability next species new" column indicate too few samples (<6 survey sites) for accurate calculation.

* Key to lithology

1 = undescribed

2 = coarsely textured unconsolidated deposits: low fertility

3 = coarsely textured unconsolidated deposits/finely textured unconsolidated deposits: low fertility

4 = finely textured unconsolidated deposits: highest fertility

5 = finely textured unconsolidated deposits/coarsely textured unconsolidated deposits: moderate fertility

6 = granites and gneisses: moderate to low fertility

7 = limestone: ??? fertility, limestone/coarsely textured unconsolidated deposits: ??? fertility

8 = sedimentary rock: low fertility, sedimentary/granites and gneisses: low fertility, sedimentary/volcanic rock : low/moderate fertility, sedimentary/limestone rock-
??fertility, volcanic/sedimentary rock: high fertility

9 = ???volcanic rock: ??? fertility

STRATA WITH MODERATE SAMPLING INTENSITY (10 - 40 sites per 10,000 ha)

Stratum No.	mean ann. precip	min. temp. coldest month	max. temp warmest month	Lithology	# spp	# sites	probability next species new (%)	forest area (ha)	% of forest in North East	# polygons	site density (sites per 10,000 ha)	distribution (geographic units)
13	high	low	moderate	8	1033	298	3	123,946	7.85	434	24.04	Upper Murray Mountains, Wellington Mountains, Cobungra Mountains, Dargo Mountains, Macalister Mountains
62	high	high	high	8	621	160	6	96,305	6.10	1300	16.61	Strzelecki Foothills, Aberfeldy Foothills, West Gippsland Foothills, Fish Creek Coastal
17	high	low	moderate	6	733	93	8	53,737	3.40	136	17.31	Cobungra Mountains, Upper Murray Mountains, Nunniong Mountains, Haunted Mountains

16	moderate	low	high	8	765	131	4	53,446	3.38	578	24.51	Nunniiong Mountains, Upper Murray Mountains, Cobungra Mountains, Haunted Mountains, Dargo Mountains
8	high	low	high	8	720	111	4	46,118	2.92	179	24.07	Upper Murray Mountains, Cobungra Mountains
9	moderate	moderate	v.high	8	535	49	9	42,891	2.72	585	11.42	Dargo Mountains, Haunted Mountains, Nunniiong Mountains, Taylor Foothills, Upper Murray Mountains, Cobungra Mountains, Avon Foothills
60	low	high	v.high	8	485	37	19	36,194	2.29	157	10.22	Avon Foothills, Dargo Mountains
68	moderate	high	high	8	497	75	11	32,518	2.06	670	23.06	Strzelecki Foothills, Aberfeldy Foothills, Latrobe Foothills, Avon Foothills
87	low	high	high	2	522	53	10	31,818	2.01	418	16.66	Mullungdung Coastal, Wellington Coastal Plains, King Coastal Plains
41	moderate	low	moderate	8	405	31	12	27,041	1.71	240	11.46	Dargo Mountains, Haunted Mountains, Cobungra Mountains, Avon Foothills
76	low	high	v.high	3	326	21	21	15,430	0.98	300	13.61	Wellington Coastal Plains, Avon Foothills, King Coastal Plains, Taylor Foothills
19	high	low	low	6	355	22	21	14,191	0.90	132	15.5	Cobungra Mountains, Upper Murray Mountains, Nunniiong Mountains
2	moderate	moderate	v.high	6	389	24	17	13,974	0.88	173	17.18	Nunniiong Mountains, Cobungra Mountains, Upper Murray Mountains
7	high	low	high	6	369	17	20	12,829	0.81	107	13.25	Upper Murray Mountains, Cobungra Mountains
57	moderate	high	v.high	5	285	19	26	12,466	0.79	377	15.24	Taylor Foothills, Latrobe foothills, Aberfeldy Foothills
84	low	high	high	3	280	11	31	10,887	0.69	436	10.1	Mullungdung Coastal, Wellington Coastal Plains, King Coastal Plains
59	moderate	high	v.high	6	265	11	36	9,624	0.61	223	11.43	Taylor Foothills, Nunniiong Mountains, Avon Foothills
26	high	low	moderate	9	242	16	13	8,452	0.54	95	18.93	Wellington Mountains, Nunniiong Mountains, Dargo Mountains,

												Cobungra Mountains, Macalister Mountains, Upper Murray Mountains
63	moderate	high	v.high	9	251	13	28	8,059	0.51	85	16.13	Avon Foothills, Aberfeldy Foothills, Nunniong Mountains, Macalister Mountains
71	moderate	high	high	9	318	28	14	7,659	0.48	335	36.56	Strzelecki Foothills, Mullungdung Coastal, Avon Foothills, Latrobe Valley
25	moderate	moderate	high	9	255	16	18	7,071	0.45	81	22.63	Avon Foothills, Nunniong Mountains, Upper Murray Mountains
22	high	moderate	high	9	169	13	30	6,381	0.40	75	20.37	Wellington Mountains, Macalister Mountains, Matlock Mountains, Avon Foothills, Strzelecki Foothills
69	high	high	high	9	160	14	44	5,007	0.32	585	27.96	Strzelecki Foothills, West Gippsland Foothills, Macalister Mountains
28	moderate	low	high	9	239	14	18	4,890	0.31	20	28.63	Nunniong Mountains, Upper Murray Mountains
89	high	high	high	5	197	13	39	4,645	0.29	253	27.99	Fish Creek Coastal, Strzelecki Foothills, Latrobe Foothills
73	moderate	high	v.high	4	204	8	49	4,558	0.29	331	17.55	Taylor Foothills, Aberfeldy Foothills, Latrobe Valley
93	high	high	high	3	198	13	25	3,925	0.25	101	33.12	Strzelecki Foothills, West Gippsland Foothills
23	moderate	moderate	v.high	9	241	8	24	3,867	0.24	25	20.69	Nunniong Mountains, Upper Murray Mountains
92	high	high	high	4	70	3	*	1,135	0.07	159	26.43	Strzelecki Foothills, West Gippsland Foothills, Wilsons Promontory
Total								699,061	44.26			

STRATA WITH LOW SAMPLING INTENSITY (>0 - 10 sites per 10,000 ha)

Stratum No.	mean ann. precip	min. temp. coldest month	max. temp warmest month	Lithology	# spp	# sites	probability next species	forest area (ha)	% of forest in North East	# polygons	site density (sites per	distribution (geographic units)
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							new (%)				10,000 ha)	
56	moderate	high	v.high	8	983	221	2	279,557	17.70	604	7.91	Taylor Foothills, Avon Foothills, Aberfeldy Foothills, Nunniong Mountains, Dargo Mountains, Haunted Mountains
20	high	moderate	high	8	520	54	10	108,222	6.85	398	4.99	Macalister Mountains, Aberfeldy Foothills, Wellington Mountains, Matlock Mountains
27	moderate	moderate	high	8	684	71	8	90,873	5.75	372	7.81	Avon Foothills, Dargo Mountains, Wellington Mountains, Cobungra Mountains, Nunniong Mountains
37	low	moderate	high	8	275	15	19	31,222	1.98	211	4.8	Haunted Mountains, Dargo Mountains, Nunniong Mountains, Cobungra Mountains
14	moderate	low	high	6	392	18	19	27,609	1.75	214	6.52	Cobungra Mountains, Nunniong Mountains, Haunted Mountains, Upper Murray Mountains
40	low	moderate	v.high	8	268	9	43	21,922	1.39	223	4.11	Haunted Mountains, Dargo Mountains, Nunniong Mountains
55	high	high	v.high	8	228	11	31	21,479	1.36	164	5.12	Macalister Mountains, Matlock Mountains, Aberfeldy Foothills, Latrobe Foothills
53	high	moderate	moderate	8	186	8	43	17,762	1.12	444	4.5	Macalister Mountains, Matlock Mountains, Aberfeldy Foothills, Wellington Mountains
42	low	low	high	8	236	11	38	13,023	0.82	247	8.45	Haunted Mountains, Cobungra Mountains, Nunniong Mountains
35	moderate	low	moderate	6	252	12	20	12,039	0.76	137	9.97	Cobungra Mountains, Haunted Mountains, Nunniong Mountains
88	low	high	high	5	184	7	39	11,192	0.71	341	6.25	Mullungdung Coastal, Wellington Coastal Plains
39	low	moderate	v.high	6	144	4	*	10,165	0.64	196	3.94	Nunniong Mountains, Haunted Mountains
30	moderate	moderate	high	6	207	6	43	9,726	0.62	96	6.17	Cobungra Mountains, Nunniong Mountains, Avon Foothills
38	low	moderate	high	6	166	4	*	8,299	0.53	122	4.82	Haunted Mountains, Nunniong Mountains
43	low	low	high	6	47	1	*	5,761	0.36	142	1.74	Haunted Mountains, Nunniong Mountains, Cobungra Mountains

61	low	high	v.high	5	53	2	*	5,703	0.36	151	3.51	Avon Foothills, Taylor Foothills, King Coastal Plains
74	moderate	high	v.high	3	37	2	*	4,808	0.30	244	4.16	Taylor Foothills, King Coastal Plains, Aberfeldy Foothills, Avon Foothills
10	high	moderate	v.high	8	124	3	*	4,252	0.27	115	7.05	Upper Murray Mountains, Wellington Mountains, Cobungra Mountains
58	high	moderate	moderate	9	20	1	*	1,057	0.07	74	9.46	Wellington Mountains, Macalister Mountains, Avon Foothills, Matlock Mountains
Total								684,671	43.34			

STRATA (>500 HA) WITHOUT SAMPLE SITES

Stratum No.	mean ann. precip	min. temp. coldest month	max. temp warmest month	Lithology	# spp	# sites	Probability next species new (%)	forest area (ha)	% of forest in North East	# polygons	site density (sites per 10,000 ha)	distribution (geographic units)
85	low	high	high	4	0	0	100	2,345	0.15	314	0	Mullungdung Coastal, Latrobe Valley, Wellington Coastal Plains, King Coastal Plains
64	low	high	v.high	6	0	0	100	1,239	0.08	76	0	Dargo Mountains, Avon Foothills
24	high	low	high	9	0	0	100	1,072	0.07	13	0	Upper Murray Mountains
52	high	moderate	high	5	0	0	100	655	0.04	17	0	Wellington Mountains
								5,311	0.34			

STRATA OCCUPYING LESS THAN 500 HECTARES

Stratum No.	mean ann. precip	min. temp. coldest month	max. temp warmest month	Lithology	# spp	# sites	Probability next species new (%)	forest area (ha)	% of forest in North East	# polygons	site density (sites per 10,000 ha)	distribution (geographic units)
3	high	moderate	v.high	5	0	0	100	464	0.03	30	0	Wellington Mountains
29	high	moderate	high	6	0	0	100	428	0.03	18	0	Cobungra Mountains
31	moderate	low	high	4	127	3	*	426	0.027	27	70.47	Upper Murray Mountains, Cobungra Mountains

102	moderate	high	high	7	61	2	*	398	0.025	9	50.2	Wilsons Promontory
70	high	high	v.high	9	0	0	100	353	0.02	15	0	Macalister Mountains, Wellington Mountains
21	high	moderate	v.high	9	0	0	100	279	0.02	12	0	Upper Murray Mountains
1	moderate	moderate	v.high	5	0	0	100	260	0.02	24	0	Upper Murray Mountains, Nunniong Mountains
94	high	high	high	1	0	0	100	242	0.02	39	0	Fish Creek Coastal
44	low	moderate	v.high	5	0	0	100	225	0.01	14	0	Nunniong Mountains
46	moderate	low	moderate	9	0	0	100	181	0.01	10	0	Nunniong Mountains, Cobungra Mountains
15	moderate	low	v.high	8	0	0	100	178	0.01	15	0	Upper Murray Mountains
12	moderate	low	v.high	6	0	0	100	170	0.01	17	0	Upper Murray Mountains
101	high	high	high	7	36	1	*	147	0.01	4	67.77	Wilsons Promontory
83	moderate	high	v.high	1	0	0	100	135	0.01	38	0	Aberfeldy Foothills, Latrobe Valley
103	high	moderate	moderate	6	0	0	100	135	0.01	5	0	Wilsons Promontory
45	low	moderate	high	9	49	1	*	133	0.01	4	75.15	Nunniong Mountains
65	high	low	low	5	0	0	100	133	0.01	2	0	Wellington Mountains
54	high	high	v.high	5	25	1	*	128	0.01	14	77.83	Wellington Mountains
49	low	moderate	high	7	0	0	100	85	0.01	8	0	Nunniong Mountains
90	low	high	high	1	0	0	100	73	0.00	42	0	Wellington Coastal Plains
32	moderate	moderate	high	4	68	2	*	72	0.004	8	278.93	Upper Murray Mountains
66	high	low	moderate	5	0	0	100	71	0.00	1	0	Wellington Mountains
34	high	low	high	4	0	0	100	66	0.00	3	0	Upper Murray Mountains
5	high	moderate	v.high	6	0	0	100	63	0.00	7	0	Upper Murray Mountains
47	low	moderate	v.high	9	0	0	100	61	0.00	3	0	Nunniong Mountains
67	moderate	moderate	moderate	8	0	0	100	53	0.00	6	0	Avon Foothills, Wellington Mountains
48	low	moderate	v.high	7	0	0	100	48	0.00	12	0	Nunniong Mountains
11	high	low	v.high	8	0	0	100	45	0.00	7	0	Upper Murray Mountains
6	high	low	v.high	6	0	0	100	36	0.00	3	0	Upper Murray Mountains
104	high	high	moderate	5	0	0	100	35	0.00	2	0	Wilsons Promontory
75	low	high	v.high	9	0	0	100	26	0.00	1	0	Avon Foothills
105	moderate	high	moderate	5	0	0	100	26	0.00	3	0	Wilsons Promontory
50	moderate	low	high	7	0	0	100	19	0.00	4	0	Nunniong Mountains
4	high	low	v.high	5	0	0	100	9	0.00	1	0	Upper Murray Mountains
33	high	low	moderate	4	0	0	100	9	0.00	1	0	Upper Murray Mountains
51	low	low	high	9	0	0	100	9	0.00	1	0	Nunniong Mountains
80	moderate	high	v.high	2	0	0	100	6	0.00	10	0	Taylor Foothills

Total

5,227

0.31