

### Appendix 1. Frequencies and life forms of species recorded from plots in adjacent grassland, invaded grassland and forest at thirteen sites on the Bunya Mountains

LF = Life forms: t = trees; s = shrubs; v = lianes; ss = small shrubs; g = grasses; d = sedges; h = forbs; f = ferns; w = twiners. *n* = the number of quadrats across all habitats in which each species was recorded (total *n* = 312). %g, %ig and %f = % of grassland, invaded grassland and forest quadrats in which each species was recorded. Exotic species are denoted by #

Species	LF	<i>n</i>	% g	% ig	% f	Species	LF	<i>n</i>	% g	% ig	% f
<i>Abutilon oxycarpum</i>	ss	20	0.0	4.8	14.4	<i>Brunoniella australis</i>	h	41	9.6	13.5	16.3
<i>Acacia implexa</i>	t	37	9.6	11.5	14.4	<i>Bursaria spinosa</i>	t	1	0.0	0.0	1.0
<i>Acacia irrorata</i>	t	5	1.0	2.9	1.0	<i>subsp. spinosa</i>					
<i>Acacia maidenii</i>	t	88	5.8	38.5	40.4	<i>Canthium buxifolium</i>	t	18	1.9	2.9	12.5
<i>Acacia melanoxylon</i>	t	11	0.0	5.8	4.8	<i>Capillipedium</i>	g	24	17.3	5.8	0.0
<i>Adiantum atroviride</i>	f	1	1.0	0.0	0.0	<i>parviflorum</i>					
<i>Adiantum formosanum</i>	f	1	0.0	1.0	0.0	<i>Capparis arborea</i>	t	5	0.0	0.0	4.8
<i>Ajuga australis</i>	h	21	8.7	7.7	3.8	<i>Carex appressa</i>	d	11	0.0	1.9	8.7
<i>Alphitonia excelsa</i>	t	21	0.0	7.7	12.5	<i>Carex breviculmis</i>	d	19	7.7	1.9	8.7
<i>Alternanthera nana</i>	h	7	4.8	1.9	0.0	<i>Carex inversa</i>	d	107	42.3	39.4	21.2
<i>Alyxia ruscifolia</i>	s	16	0.0	1.9	13.5	<i>Cassinia laevis</i>	s	19	2.9	10.6	4.8
<i>Amaranthus hybridus</i> #	h	1	1.0	0.0	0.0	<i>Cassinia quinquefaria</i>	s	6	1.0	0.0	4.8
<i>Amaranthus viridis</i> #	h	1	0.0	0.0	1.0	<i>Cayratia acris</i>	v	1	0.0	1.0	0.0
<i>Anagallis arvensis</i> #	h	46	29.8	9.6	4.8	<i>Cayratia clematidea</i>	v	88	6.7	28.8	49.0
<i>Angophora floribunda</i>	t	4	0.0	0.0	3.8	<i>Cenchrus caliculatus</i> #	g	12	0.0	1.9	9.6
<i>Aphananthe</i>	t	1	0.0	0.0	1.0	<i>Centipeda minima</i>	h	2	1.9	0.0	0.0
<i>philippinensis</i>						<i>Chamaesyce</i>	h	6	1.9	2.9	1.0
<i>Araujia sericifera</i> #	v	4	2.9	0.0	1.0	<i>drummondii</i>					
<i>Aristida acuta</i>	g	1	0.0	1.0	0.0	<i>Cheilanthes distans</i>	f	14	6.7	3.8	2.9
<i>Aristida gracilipes</i>	g	4	0.0	3.8	0.0	<i>Cheilanthes sieberi</i>	f	30	12.5	15.4	1.0
<i>Aristida personata</i>	g	14	10.6	1.9	1.0	<i>Chenopodium murale</i> #	h	1	1.0	0.0	0.0
<i>Aristida ramosa</i>	g	141	46.2	52.9	36.5	<i>Chenopodium pumilio</i>	h	11	8.7	1.0	1.0
<i>Arthropodium</i>	h	6	0.0	2.9	2.9	<i>Chloris divaricata</i>	g	2	1.9	0.0	0.0
<i>milleflorum</i>						<i>Chloris ventricosa</i>	g	23	9.6	9.6	2.9
<i>Asperula conferta</i>	h	61	18.3	17.3	23.1	<i>Chrysocephalum</i>	h	29	13.5	10.6	3.8
<i>Auranticarpa</i>	t	1	0.0	0.0	1.0	<i>apiculatum</i>					
<i>rhubifolia</i>						<i>Cirsium vulgare</i> #	h	58	26.0	18.3	11.5
<i>Austrodanthonia</i>	g	17	4.8	2.9	8.7	<i>Cissus antarctica</i>	v	12	0.0	4.8	6.7
<i>racemosa</i>						<i>Claoxylon australe</i>	s	7	0.0	2.9	3.8
<i>Austrostenisia blackii</i>	v	6	0.0	1.9	3.8	<i>Clematis glycinoides</i>	v	6	0.0	1.9	3.8
<i>var. blackii</i>						<i>Clerodendrum</i>	s	5	1.0	2.9	1.0
<i>Austrostipa scabra</i>	g	2	1.0	0.0	1.0	<i>tomentosum</i>					
<i>Backhousia</i>	t	1	0.0	1.0	0.0	<i>Commelina diffusa</i>	h	61	4.8	19.2	34.6
<i>angustifolia</i>						<i>Conyza sumatrensis</i> #	ss	30	24.0	1.9	2.9
<i>Bidens pilosa</i> #	h	66	8.7	26.0	28.8	<i>Crassula sieberiana</i>	h	44	30.8	10.6	1.0
<i>Bothriochloa bunyensis</i>	g	5	3.8	0.0	1.0	<i>subsp. sieberiana</i>					
<i>Bothriochloa decipiens</i>	g	44	22.1	13.5	6.7	<i>Crotalaria</i>	h	7	0.0	1.0	5.8
<i>Botrychium australe</i>	f	1	0.0	1.0	0.0	<i>medicaginea</i>					
<i>Brachychiton</i>	t	2	0.0	0.0	1.9	<i>Cupaniopsis parvifolia</i>	t	11	0.0	0.0	10.6
<i>populneus</i>						<i>Cyanthillium cinereum</i>	h	66	24.0	12.5	26.9
<i>Bracteantha bracteata</i>	h	1	1.0	0.0	0.0	<i>Cyclosporum</i>	h	69	37.5	20.2	8.7
<i>Breynia oblongifolia</i>	s	52	2.9	18.3	28.8	<i>leptophyllum</i> #					

Species	LF	n	% g	% ig	% f	Species	LF	n	% g	% ig	% f
<i>Cymbopogon refractus</i>	g	131	38.5	48.1	39.4	<i>Flindersia collina</i>	t	5	1.0	1.0	2.9
<i>Cynodon dactylon</i>	g	1	1.0	0.0	0.0	<i>Gahnia aspera</i>	d	6	0.0	2.9	2.9
<i>Cynoglossum australe</i>	h	1	0.0	1.0	0.0	<i>Galactia tenuiflora</i>	w	35	8.7	17.3	7.7
<i>Cyperus fulvus</i>	d	61	25.0	30.8	2.9	<i>Galium ciliare/migrans</i>	h	56	20.2	19.2	14.4
<i>Cyperus gracilis</i>	d	139	41.3	59.6	32.7	<i>Geijera latifolia</i>	t	14	0.0	0.0	13.5
<i>Cyperus sesquiflorus</i> <sup>#</sup>	d	1	1.0	0.0	0.0	<i>Geitonoplesium</i>	v	25	1.9	7.7	14.4
<i>Denhamia</i>	t	3	0.0	0.0	2.9	<i>cymosum</i>					
<i>pittosporoides</i>						<i>Geranium solanderi</i>	h	198	80.8	59.6	50.0
<i>Desmodium</i>	w	34	2.9	10.6	19.2	<i>Glossocardia bidens</i>	h	2	1.0	1.0	0.0
<i>brachypodum</i>						<i>Glycine clandestina</i>	w	34	11.5	1.0	20.2
<i>Desmodium gunnii</i>	w	5	1.9	0.0	2.9	<i>Glycine</i>	w	133	39.4	50.0	38.5
<i>Desmodium varians</i>	w	177	54.8	63.5	51.9	<i>latifolia/tabacina</i>					
<i>Dianella</i>	h	45	1.9	19.2	22.1	<i>Gomphocarpus</i>	h	191	68.3	61.5	53.8
<i>brevipedunculata</i>						<i>physocarpus</i> <sup>#</sup>					
<i>Dianella caerulea</i>	h	1	0.0	1.0	0.0	<i>Grevillea robusta</i>	t	14	4.8	5.8	2.9
<i>Dianella longifolia</i>	h	60	21.2	21.2	15.4	<i>Grewia latifolia</i>	s	1	0.0	0.0	1.0
<i>Dianella revoluta</i>	h	3	2.9	0.0	0.0	<i>Guioa semiglauca</i>	t	1	0.0	1.0	0.0
<i>Dichanthium sericeum</i>	g	32	16.3	12.5	1.9	<i>Hardenbergia violacea</i>	w	7	0.0	1.9	4.8
<i>Dichanthium tenue</i>	g	64	25.0	22.1	14.4	<i>Homalanthus nutans</i>	t	1	0.0	1.0	0.0
<i>Dichelachne rara</i>	g	13	10.6	1.0	1.0	<i>Hybanthus</i>	h	160	47.1	61.5	45.2
<i>Dichondra repens</i>	h	94	22.1	33.7	34.6	<i>enneaspermus</i>					
<i>Digitaria brownii</i>	g	111	52.9	32.7	21.2	<i>Hybanthus stellarioides</i>	h	8	4.8	0.0	2.9
<i>Digitaria ciliaris</i> <sup>#</sup>	g	4	2.9	0.0	1.0	<i>Hydrocotyle laxiflora</i>	h	201	93.3	62.5	37.5
<i>Digitaria diffusa</i>	g	3	1.9	0.0	1.0	<i>Hypericum gramineum</i>	h	39	25.0	10.6	1.9
<i>Digitaria</i>	g	1	1.0	0.0	0.0	<i>Hypochaeris</i>	h	8	4.8	1.9	1.0
<i>divaricatissima</i>						<i>microcephala</i> var.					
<i>Diplocyclos palmatus</i>	v	4	0.0	0.0	3.8	<i>albiflora</i> <sup>#</sup>					
<i>Dodonaea viscosa</i>	s	5	0.0	0.0	4.8	<i>Imperata cylindrica</i>	g	32	14.4	9.6	6.7
<i>Drypetes deplanchei</i>	t	5	0.0	1.0	3.8	<i>Ipomoea plebeia</i>	w	6	3.8	1.9	0.0
<i>Echinopogon ovatus</i>	g	7	4.8	1.0	1.0	<i>Jasminum didymum</i>	v	38	1.0	7.7	27.9
<i>Einadia hastata</i>	h	39	4.8	20.2	12.5	<i>Jasminum</i>	v	37	0.0	9.6	26.0
<i>Einadia nutans</i>	h	11	1.0	2.9	6.7	<i>simplicifolium</i>					
<i>Elattostachys</i>	t	23	0.0	6.7	15.4	<i>Juncus continuus</i>	d	1	1.0	0.0	0.0
<i>xylocarpa</i>						<i>Juncus usitatus</i>	d	4	2.9	0.0	1.0
<i>Elymus scaber</i>	g	8	2.9	0.0	4.8	<i>Lagenophora stipitata</i>	h	29	5.8	10.6	11.5
<i>Epilobium</i>	h	21	20.2	0.0	0.0	<i>Lantana camara</i> <sup>#</sup>	s	39	1.0	15.4	21.2
<i>billardierianum</i>						<i>Lepidium africanum</i> <sup>#</sup>	h	1	1.0	0.0	0.0
<i>Eragrostis brownii</i>	g	16	5.8	8.7	1.0	<i>Lepidosperma laterale</i>	d	2	0.0	0.0	1.9
<i>Eragrostis elongata</i>	g	3	2.9	0.0	0.0	<i>Leptochloa decipiens</i>	g	5	1.0	1.0	2.9
<i>Eragrostis leptostachya</i>	g	47	23.1	13.5	8.7	<i>Lespedeza juncea</i>	ss	111	43.3	36.5	26.9
<i>Eremophila debilis</i>	ss	3	1.0	1.9	0.0	<i>subsp. sericea</i>					
<i>Eriochloa procera</i>	g	1	0.0	0.0	1.0	<i>Lobelia purpurascens</i>	h	176	46.2	67.3	55.8
<i>Erythrina vespertilio</i>	t	1	0.0	0.0	1.0	<i>Lomandra longifolia</i>	h	10	0.0	2.9	6.7
<i>Eucalyptus eugenioides</i>	t	1	0.0	1.0	0.0	<i>Lomandra multiflora</i>	h	7	0.0	3.8	2.9
<i>Eucalyptus tereticornis</i>	t	119	5.8	66.3	42.3	<i>Mallotus philippensis</i>	t	6	0.0	1.0	4.8
<i>Euroschinus falcatus</i>	t	6	0.0	0.0	5.8	<i>Malvastrum</i>	h	22	7.7	8.7	4.8
<i>Eustrephus latifolius</i>	v	22	6.7	2.9	11.5	<i>americanum</i> <sup>#</sup>					
<i>Evolvulus alsinoides</i>	h	4	1.9	1.9	0.0	<i>Marsdenia lloydii</i>	v	4	0.0	1.9	1.9
<i>Exocarpos</i>	t	7	0.0	4.8	1.9	<i>Maytenus bilocularis</i>	t	6	0.0	1.9	3.8
<i>cupressiformis</i>						<i>Maytenus disperma</i>	t	9	0.0	0.0	8.7
<i>Fimbristylis dichotoma</i>	d	24	16.3	6.7	0.0	<i>Melia azedarach</i>	t	22	0.0	6.7	14.4
<i>Flindersia australis</i>	t	7	0.0	2.9	3.8	<i>Melinis repens</i> <sup>#</sup>	g	1	0.0	1.0	0.0

Species	LF	n	% g	% ig	% f
<i>Mentha diemenica</i>	h	95	16.3	44.2	30.8
<i>Microlaena stipoides</i>	g	68	13.5	26.0	26.0
<i>Muehlenbeckia gracillima</i>	v	1	0.0	0.0	1.0
<i>Myoporum acuminatum</i>	s	1	0.0	1.0	0.0
<i>Notelaea microcarpa</i>	t	1	0.0	1.0	0.0
<i>Nyssanthes diffusa</i>	ss	35	0.0	14.4	19.2
<i>Olea paniculata</i>	t	7	0.0	2.9	3.8
<i>Opercularia hispida</i>	h	2	0.0	0.0	1.9
<i>Ophioglossum gramineum</i>	f	2	1.9	0.0	0.0
<i>Ophioglossum lusitanicum</i>	f	34	24.0	7.7	1.0
<i>Oplismenus aemulus</i>	g	51	0.0	24.0	25.0
<i>Opuntia stricta</i> <sup>#</sup>	s	3	0.0	1.9	1.0
<i>Opuntia tomentosa</i> <sup>#</sup>	s	5	0.0	1.9	2.9
<i>Oxalis chnoodes</i>	h	1	0.0	0.0	1.0
<i>Oxalis radicata/thompsoniae</i>	h	116	44.2	34.6	32.7
<i>Pandorea pandorana</i>	v	24	3.8	10.6	8.7
<i>Panicum effusum</i>	g	72	36.5	23.1	9.6
<i>Panicum queenslandicum</i>	g	14	8.7	4.8	0.0
<i>Parsonsia longipetiolata</i>	v	2	0.0	1.9	0.0
<i>Parsonsia sp.</i>	v	3	1.9	0.0	1.0
<i>Paspalidium distans</i>	g	11	9.6	1.0	0.0
<i>Paspalidium gracile</i>	g	70	15.4	24.0	27.9
<i>Paspalum dilatatum</i> <sup>#</sup>	g	8	6.7	1.0	0.0
<i>Passiflora subpeltata</i> <sup>#</sup>	v	12	2.9	3.8	4.8
<i>Peripleura hispida</i>	h	5	1.9	1.9	1.0
<i>Phyllanthus virgatus</i>	h	20	6.7	7.7	4.8
<i>Physalis ixocarpa</i> <sup>#</sup>	h	6	1.0	4.8	0.0
<i>Phytolacca octandra</i> <sup>#</sup>	s	6	0.0	1.9	3.8
<i>Picris angustifolia</i>	h	12	10.6	0.0	1.0
<i>subsp. carolorum-henricorum</i>					
<i>Pimelea neoanglica</i>	ss	11	0.0	6.7	3.8
<i>Pittosporum undulatum</i>	t	3	0.0	1.9	1.0
<i>Pittosporum viscidum</i>	s	1	0.0	0.0	1.0
<i>Plantago debilis</i>	h	43	19.2	13.5	8.7
<i>Plectranthus parviflorus</i>	h	55	4.8	22.1	26.0
<i>Poa labillardieri</i>	g	276	90.4	98.1	76.9
<i>Polygala japonica</i>	h	11	3.8	3.8	2.9
<i>Polyscias elegans</i>	t	4	0.0	1.9	1.9
<i>Poranthera microphylla</i>	h	5	0.0	2.9	1.9
<i>Pseudanthemum variabile</i>	h	1	0.0	0.0	1.0
<i>Psychotria daphnoides</i>	s	2	0.0	0.0	1.9
<i>Pterostylis ophioglossa</i>	h	2	1.0	1.0	0.0

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<i>Ranunculus lappaceus</i>	h	16	13.5	0.0	1.9
<i>Rapanea variabilis</i>	s	8	0.0	2.9	4.8
<i>Rhodosphaera rhodanthema</i>	t	4	0.0	0.0	3.8
<i>Rorippa dietrichiana</i>	h	4	1.0	1.0	1.9
<i>Rostellularia adscendens</i>	h	45	12.5	16.3	14.4
<i>Rubus parvifolius</i>	v	151	41.3	46.2	57.7
<i>Rumex brownii</i>	h	35	22.1	8.7	2.9
<i>Salvia plebeia</i>	h	4	1.9	1.0	1.0
<i>Sarga leiocladum</i>	g	194	70.2	60.6	55.8
<i>Scleria mackaviensis</i>	d	67	11.5	23.1	29.8
<i>Secamone elliptica</i>	v	1	1.0	0.0	0.0
<i>Senecio amygdalifolius</i>	ss	1	0.0	1.0	0.0
<i>Senecio hispidulus</i>	h	57	19.2	22.1	13.5
<i>Senecio lautus</i>	h	2	1.9	0.0	0.0
<i>Senecio quadridentatus</i>	h	38	13.5	12.5	10.6
<i>Senna barclayana</i>	ss	47	8.7	18.3	18.3
<i>Sicyos australis</i>	v	2	0.0	0.0	1.9
<i>Sida rhombifolia</i> <sup>#</sup>	h	5	1.9	1.9	1.0
<i>Sida subspicata</i>	h	25	2.9	19.2	1.9
<i>Sigesbeckia orientalis</i> <sup>#</sup>	ss	176	19.2	73.1	76.9
<i>Siphonodon australis</i>	t	1	0.0	0.0	1.0
<i>Smilax australis</i>	v	1	0.0	0.0	1.0
<i>Solanum americanum</i> <sup>#</sup>	ss	5	0.0	1.0	3.8
<i>Solanum limitare</i>	ss	22	1.0	7.7	12.5
<i>Solanum nemophilum</i>	ss	2	0.0	1.0	1.0
<i>Solanum opacum</i>	h	47	21.2	18.3	5.8
<i>Solanum pseudocapsicum</i> <sup>#</sup>	ss	1	0.0	1.0	0.0
<i>Solanum rixosum</i>	ss	13	0.0	6.7	5.8
<i>Solanum seaforthianum</i> <sup>#</sup>	v	14	0.0	2.9	10.6
<i>Solanum stelligerum</i>	ss	52	0.0	26.9	23.1
<i>Solanum stupefactum</i>	ss	2	0.0	1.0	1.0
<i>Solenogyne bellioides</i>	h	2	1.0	1.0	0.0
<i>Sporobolus elongatus</i>	g	77	41.3	28.8	3.8
<i>Stackhousia viminea</i>	h	8	3.8	3.8	0.0
<i>Stellaria media</i> <sup>#</sup>	h	1	1.0	0.0	0.0
<i>Stephania japonica</i>	v	8	0.0	2.9	4.8
<i>Streblus brunonianus</i>	t	1	0.0	0.0	1.0
<i>Strychnos psilosperma</i>	t	1	0.0	0.0	1.0
<i>Tagetes minuta</i> <sup>#</sup>	ss	1	1.0	0.0	0.0
<i>Tarenna cameronii</i>	t	2	0.0	0.0	1.9
<i>Tephrosia sp.</i>	h	3	0.0	0.0	2.9
<i>Tetrastigma nitens</i>	v	11	0.0	1.0	9.6
<i>Teucrium argutum</i>	h	53	20.2	16.3	14.4
<i>Themeda triandra</i>	g	72	32.7	24.0	12.5
<i>Tinospora smilacina</i>	v	2	0.0	0.0	1.9
<i>Tricoryne elatior</i>	h	1	0.0	1.0	0.0
<i>Trifolium dubium</i> <sup>#</sup>	h	16	7.7	1.0	6.7
<i>Trophis scandens</i>	s	7	0.0	1.9	4.8

Species	LF	<i>n</i>	% g	% ig	% f
<i>Turraea pubescens</i>	t	5	0.0	0.0	4.8
<i>Tylophora paniculata</i>	v	1	0.0	1.0	0.0
<i>Urtica incisa</i>	h	7	0.0	1.0	5.8
<i>Verbena aristigera</i> <sup>#</sup>	h	47	29.8	8.7	6.7
<i>Verbena bonariensis</i> <sup>#</sup>	h	29	23.1	2.9	1.9
<i>Verbena officinalis</i> <sup>#</sup>	h	3	2.9	0.0	0.0
<i>Veronica plebeia</i>	v	20	15.4	2.9	1.0
<i>Viola betonicifolia</i>	h	37	25.0	2.9	7.7
<i>Vittadinia sulcata</i>	h	10	0.0	3.8	5.8
<i>Vittadinia tenuissima</i>	h	1	0.0	1.0	0.0
<i>Wahlenbergia communis/gracilis</i>	h	89	45.2	32.7	7.7
<i>Wahlenbergia stricta</i>	h	10	9.6	0.0	0.0
<i>Wedelia spilanthoides</i>	h	5	1.9	2.9	0.0
<i>Wikstroemia indica</i>	s	2	0.0	0.0	1.9
<i>Zehneria cunninghamii</i>	v	5	0.0	0.0	4.8
<i>Zornia dyctiocarpa</i>	h	2	1.0	1.0	0.0