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FLORA SURVEY OF THE MORESBY RANGE, AUGUST 1983

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ABSTRACT

A comprehensive list of the 417 vascular plants recorded from the Moresby Range in August 1983 is presented. An analysis of the floristic composition of the vegetation of this Range is given. Brief notes on the physical features, land use and climate of the Range area are also provided.

INTRODUCTION

The survey area (Figure 1) is located northeast of Geraldton extending from the Howatharra Hills in the north to Mount Fairfax in the south and Nanson in the east. The Northwest Coastal Highway forms the western boundary. The landscape is mainly high flat topped mesas surrounded by wheat and sheep farms and some hobby farms in the west. This area was selected for study because the flora was considered to be under-collected and poorly understood as well as being possibly rich in rare and endemic species.

The Range is the western edge of the

Victoria Plateau, whose lateritic mesas are dissected by deep gorges of old river systems (Playford et al. 1970). Thin sandy soils overlay laterite or sandstone and have a vegetation cover ranging from low to high shrublands. The younger alluvial gorge soils support low woodlands or forests which are of limited extent and are mostly very open due to the shallow depth and occurence of these soils and the competition for limited moisture.

The climate of the area is influenced by the southwesterly weather patterns dominated by westerly winter fronts. To a lesser extent tropical cyclones from the north

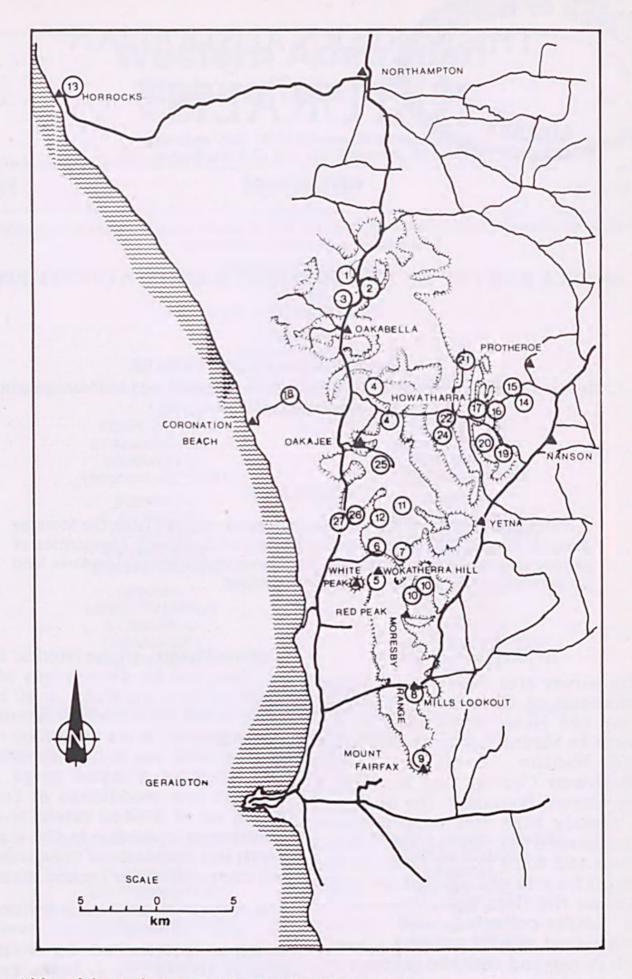


Figure 1. Map of the study area showing location of the survey sites.

during the summer months may result in limited summer rainfall. The annual rainfall ranges from 457–508 mm near the coast to 305–356 mm further inland, occurring mainly in the winter. During the summer months the area is subjected to warm dry easterly winds with temperatures commonly in excess of 38° C which may be influenced in part by the proximity of the coast.

Inaccessibility of the area has so far protected a large proportion of the vegetation from clearing for agriculture and other activities. Much of the survey area consists largely of uncleared kwongan communities occurring mainly on the slopes. Many of the larger mesas have been cleared for farming and portions of others used for gravel or recreation. The mesa slopes tend to remain protected by both their steepness and the common occurrence of Gastrolobium oxylobioides (Champion Bay Poison). Since this survey, the area fronting the footslopes on the western edge of the range has been released as building sites following a residential land capacity study (Dye et al. 1990).

METHODS

Survey sites shown on Figure 1 were selected to represent the widest possible range of habitats. A total of 27 sites were selected and as many flowering species that could be observed were sampled in each site. Eleven sites were selected on both the eastern and western edges of the range covering the whole area. The selection of these sites dependent on the level of access and the goodwill of several property owners. The remaining five sites were established off the Range to give an indication of the flora that we may encounter in the area. information enabled us to recognise species endemic to the Range. Six structural formations were recognized and the plant species of each collected. These vegetation classifications, soil types and survey sites are listed in Table 1.

DISCUSSION

A total of 417 species from 74 families (Appendix 1) were recorded for the area, of which 16 were new records or range extensions, 3 endemic, 4 poorly

Table 1. List of vegetation and soil types for each of the recording sites

VEGETATION TYPE	SOIL TYPE	SITES	
Open Scrub	BCS,LS,RCS,SC	1-2,4,6-7,10-11, 12,15-22,24-26	
Open Heath	BCS	3,5	
High Shrubland	RCS,TSD	8,13	
Low Open Forest	SC	14	
Low Open Woodland	BCS	4	
Closed Scrub	BCS	27	
Degraded	RCS,TSD	9,23	

BCS = Brown Clayey Sand, RCS = Red Clayey Sand, SC = Sandy Clay, TSD = Tamala Sand Dune, LS = Lateritic Sands

collected and the remaining 340 generally distributed in southwest Western Australia. Weeds and naturalised species occurring in this area totalled 24. Examination of the Herbarium and previously published records (McFarland 1977) revealed another 88 species not found during the present survey. These extra species (A) have been included in Appendix 1.

The total number of genera and species of the major families are listed in Table 2.

Family	Genera	Species
Asteraceae	27	33
Caesalpiniaceae	3	8
Cyperaceae	5	10
Goodeniaceae	6	14
Mimosaceae	1	19
Myrtaceae	12	37
Papilionaceae	18	29
Poaceae	18	20
Proteaceae	8	23
Rutaceae	4	9
Sterculiaceae	6	10

The list in Appendix 1 indicates a dominance of open scrub (Kwongan) occuring on a wide range of soil types for most of the survey area. The Kwongan community of this area is unique as it occurs on the steep mesa side slopes rather than the typicaly flat sandplain associations (Beard 1990). With the exception of the two degraded areas the remaining

vegetation types were usually associated with localised geological features.

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Appendi	x 1	Stipa	
		compressa	13
List of the flora o Ranges. Numbers 1–2	7 are collecting	elegantissima	A
sites. A = Species for	and in the area	semibarbata	919
but not collected du	ring this survey.	Themeda	810
Introduced species a	re marked with	australis Tuibogon	010
an asterisk *.	ic marked with	Tripogon loliiformis	25
		*Vulpia	25
Adiantaceae		myuros	10 23
Cheilanthes			
austrotenuifolia	12367810	Cyperaceae Chorizandra	
aff. austrotenuifolia	1	enodis	2
Cupressaceae		Isolepis	-
Callitris		congrua	10 21
glaucophylla	A	* prolifera	10
Juncaginaceae		Lepidosperma	
Triglochin		scabrum	A
calcitrapa	8 19 20	tenue	1
centrocarpa	36722	sp.	5
mucronata	6724	Mesomelaena	
procera	24	preissii	12 13 16
Poaceae		Schoenus	11.10
Amphipogon		brevisetis	11 12
strictus	A	odontocarpus	16 19
Aristida		unispiculatus	2 16 22
contorta	9	Restionaceae	
*Avena	0	Lepidobolus	11.12.26
sativa *Briza	9	chaetocephalus	11 12 26
maxima	26710	Loxocarya asper	5
*Bromus	36710	flexuosa	49
diandrus	9	'parthenica'	11 12
Danthonia		Centrolepidaceae	
caespitosa	A	Aphelia	
Ehrharta		cyperoides	22
longiflora	10	Centrolepis	
*Festuca		aristata	22
sp.	10	Philydraceae	
*Holcus		Philydrella	
setiger	13	pygmaea	25
*Lamarckia		Dasypogonaceae	
aurea	68	Acanthocarpus	
Neurachne	122500101112	sp.	1
alopecuroidea *Pentaschistis	123589101112	Lomandra	
airoides	10	effusa	1
Spinifex	10	maritima	1
longifolius	13	Xanthorrhoeaceae	
Sporobolus		Xanthorrhoea	
virginicus	23	preissii	4678101418
9.11.11			

Phormiaceae		Iridaceae	
Stypandra		*Chasmanthe	
glauca	2	floribunda	17
4-41-1		Orthrosanthus	
Anthericaceae		laxus	26710
Arthropodium	10	Patersonia	
preissii	10	occidentalis	7
sp.	13	Onahidaaaa	
Borya	15010	Orchidaceae	
nitida	15810	Caladenia	
Caesia	10500101110	amplexans	A
parviflora	12589101112	denticulata	4
Chamaescilla	0 (510	filamentosa	325
corymbosa	26710	flava	26710
Laxmannia		gemmata	10
omnifertilis	11 12	patersonii	
sessiliflora	2	var. longicauda	2 7
Sowerbaea		radialis	
laxiflora	125810	reptans	19
Thysanotus		Diuris	
manglesianus	2610111213	longifolia	1210
Tricoryne		Eriochilus	
elatior	10	dilatatus	9
Calabianana		Leporella	
Colchicaceae Burchardia		fimbriata	2
	267010	Lyperanthus	
umbellata	267810	nigricans	16
Wurmbea	A	Prasophyllum	
densiflora dilatata	A	cyphochilum	4
	210	fimbria	3 11 12
monantha	14	macrostachyum	
Haemodoraceae		var. ringens	567
Anigozanthos		Pterostylis	
humilis	267	vittata	
Conostylis	201	var. vittata	4 11 12
aculeata	11 12	Thelymitra	
androstemma	22	antennifera	26710
prolifera	1251014	macmillanii	21
Haemodorum	1231011	nuda	21
laxum	5	Committee	
Tribonanthes		Casuarinaceae	
violacea	2	Allocasuarina	267010
violacea	-	campestris	267810
Hypoxidaceae		huegeliana	4
Hypoxis		humilis	11 12
hookeri	67	Urticaceae	
leptantha	A	Parietaria	
occidentalis	1245810	debilis	513
Dioscoreaceae		Proteaceae	
Dioscorea		Banksia	
hastifolia	15	menziesii	11 12
			All the second s

Conospermum		Halosarcia	
stoechadis	15	indica	
triplinervium	15	subsp. indica	16
Dryandra		Maireana	
ashbyi	3 5 10	planifolia	24
sessilis	1679	Rhagodia	
Grevillea		baccata	4
argyrophylla	13	gaudichaudiana	25 26
bracteosa	A	preissii	8 11 12 13
eriostachya	11 12	Salsola	
intricata	2	kali	13
pinaster	258	Amaranthaceae	
triloba	1359	Ptilotus	
Hakea			10.24
costata	17	drummondii	10 24
erinacea	25	obovatus	24
lissocarpha	A	polystachyus	11 12
	1	villosiflorus	13
prostrata	A	Gyrostemonaceae	
pycnoneura	1510	Gyrostemon	
recurva	27810	ramulosus	22
trifurcata	27010	Tersonia	
Isopogon	2.4.9.10	cyathiflora	11 12 20 22
divergens	24810	Aizoaceae	
Petrophile	0 (710		
conifera	26710	Carpobrotus	5
macrostachya	11 12	sp.	5
media	15	Tetragonia	12
Synaphea	4 = 40	diptera	13
spinulosa	6710	Portulacaceae	
Santalaceae		Calandrinia	
Exocarpos		calyptrata	13
sparteus	67813	corrigioloides	13
Leptomeria		sp.	2
spinosa	16	Caryophyllaceae	
Santalum		*Petrorhagia	
acuminatum	4	velutina	38
		*Silene	30
Loranthaceae		gallica	67820
Amyema		*Spergularia	07020
fitzgeraldii	3	rubra	Α.
preissii	1		A
Nuytsia		Ranunculaceae	
floribunda	15	Clematis	
Polygonaceae		microphylla	10 13
Muehlenbeckia		Lauraceae	
adpressa	2 3 10	Cassytha	
AND THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED	2310	glabella	A
Chenopodiaceae		racemosa	13
Atriplex	12		15
isatidea	13	Brassicaceae	
Enchylaena		*Brassica	4.0
tomentosa	12810	tournefortii	10 11

*Raphanus raphanistrum	7	rostellifera saligna	138913 57101112162224
	materi exetur.	sphacelata	1419
Droseraceae		tetragonophylla	189
Drosera	24	ulicina	2.5
glanduligera	24	xanthina	13
macrantha	2814	sp.	2
menziesii	11 12		-
menziesii		Caesalpiniaceae	
subsp. thysanosepala	11 12	Labichea	
neesii		lanceolata	A
subsp. borealis	25	teretifolia	11 12
stolonifera		sp.	671112
subsp. humilis	11 12	Senna	
sp.	279	artemisioides	
Crassulaceae		subsp. filifolia	67
Crassula		glutinosa	
colorata	59	subsp. chatelainiana	19 23
*decumbens	9	Papilionaceae	
*natans	2	Burgesia	
Hatans	2	aphyllum	58101112
Pittosporaceae		Brachysema	
Billardiera		sp.	14
bicolor	A	Bossiaea	**
Bursaria		eriocarpa	16
occidentialis	A	spinosa	18 22
Pittosporum		Chorizema	10 22
phylliraeoides	11 12	aciculare	10 11 12
Cunoniaceae			258
		ericifolium Daviesia	230
Aphanopetalum	= 0	divaricata	11 12
clematideum	59		11 12
Surianaceae		Gastrolobium	2679101112
Stylobasium		oxylobioides	2678101112
australe	16	spinosum	2.510
spathulatum	13	var. triangulare	2 5 10
Mimosaceae		Glycine	10
Acacia		canescens	10
	140001	Gompholobium	4510
acuminata	148921	aristatum	6719
alata	= 0	marginatum	22
var. biglandulosa	59	Isotropis	0.40
bidentata	6	sp.	813
blakelyi	A	Jacksonia	
congesta	167	nematoclada	24
ericifolia	A	sternbergiana	1679
guinetii	11 12	ulicina	7 11 12
? guinetii	5810	Kennedia	
idiomorpha	10	prostrata	3
lasiocarpa	17	Lotus	
neurophylla	10 24	australis	13
oxyclada	11 12	Mirbelia	
restiacea	419	microphylla	A
		and the first of t	

multicaulis ramulosa	6710 257810	Ricinocarpos psilocladus	28
spinosa	16		20
Nemcea	10	Stackhousiaceae	
sp.	16	Stackhousia	11.10
Swainsona	10	monogyna	11 12
canescens		Tripterococcus	2.11.12
var. canescens	23	brunonis	2 11 12
Templetonia	23	Sapindaceae	
biloba	10	Diplopeltis	
Trifolium	10	huegelii	
*campestre	67	var. subintegra	37811
*subterraneum	9	petiolaris	11 12 23 26
	67	Dodonaea	
sp. Viminaria	07	ericoides	A
	A	inaequifolia	4 5 8 10 11 12
juncea	Λ	larraeoides	5
Geraniaceae		viscosa	
Erodium		ssp. angustissima	A
*botrys	158910	Rhamnaceae	
*cicutarium	13	Cryptandra	
Oxalidaceae		arbutiflora	510
Oxalis		gracilipes	4
corniculata	13	leucophracta	5
	15	aff. leucophracta	11 12
Zygophyllaceae		sp.	267
Zygophyllum		Trymalium	20.
billardierei	13	ledifolium	5
fruticulosum	13	wichurae	3 22
Rutaceae		Vitaceae	322
Boronia		Clematicissus	
coerulescens	16		1
cymosa	25810	angustissima	1
ramosa	23010	Malvaceae	
var. ramosa	11 12	Hibiscus	
scabra	A	drummondii	11 12 25
Diplolaena		huegelii	
dampieri	67	var. wrayae	11 12
grandiflora	13	Lawrencia	
microcephala	A	squamata	23
Eriostemon	**	Sida	
sp.	27	calyxhymenia	10 13
Geleznowia	21	sp.	1
verrucosa	11 12	Sterculiaceae	
	11 12	Commersonia	
Euphorbiaceae		pulchella	11 12 22
Amperea		sp.	23
sp.	13	Guichenotia	
Euphorbia		angustifolia	24589
boophthona	67824	macrantha	10
Phyllanthus		micrantha	A
calycinus	13	sarotes	A
			100

Keraudrenia	4 11 12 24	pyriformis redunca	16 2 10
hermanniifolia	4111224		210
Lasiopetalum	91323	Malleostemon	10
oppositifolium	91525	roseus	10
Rulingia		Melaleuca	
cygnorum var. borealis	13	cardiophylla	A
Thomasia	15	depressa	11 12
	5810	megacephala	36710
sp.	3610	radula	25810
Dilleniaceae		scabra	2 24
Hibbertia		uncinata	10 25
acerosa	3	viminea	167
enervia	1419	aff. viminea	25
aff. hypericoides	28101112	Micromyrtus	
potentilliflora	1258910	racemosa	
spicata	13	var. racemosa	24
Violaceae		Scholtzia	
Hybanthus		ciliata	256710
floribundus	23	parviflora	315
Thymelaeaceae		uberiflora	12 13
Pimelea		Thryptomene	
argentea	5	hyporhytis	510
aff. floribunda	51112	Verticordia	
gilgiana	23	densiflora	A
imbricata	10	monadelpha	24
microcephala	1679	picta	10 27
	1017	penicillaris	A
Myrtaceae		preissii	2510
Baeckea	11 12	· tenghi	
grandiflora Calothamnus	11 12	Haloragaceae	
	2 5 11 12	Gonocarpus	10
homalophyllus	11 12	nodulosus	10
sanguineus Calytrix	11 12	Glischrocaryon	
	671324	aureum	58101112
depressa	11 12	Apiaceae	
strigosa tenuifolia	A	Daucus	
Darwinia	Λ	glochidiatus	11 12 24
paucifolia	20	Hydrocotyle	
Eremaea	20	sp.	9
	15	Neosciadium	
sp. Eucalyptus	15	glochidiatum	23
'blaxellii'	6	Trachymene	
camaldulensis	67	cyanopetala	23
obtusiflora	26	ornata	11 12
ebbanoensis	10	pilosa	116 22
flocktoniae	5		110 22
	24	Epacridaceae	
gittinsii	24	Astroloma	10670
gracilis		aff. serratifolium	12678
loxophleba	7 10 11 12 24 27	Leucopogon	11.10
oraria	67	assimilis	1112

aff. assimilis	16	Solanaceae	
aff. revolutus	210	Anthocercis	
Lysinema		littorea	13
ciliatum	11 12	Lycium	
Primulaceae		*ferocissimum	679
*Anagallis		Solanum	
arvensis	13	ellipticum	1
		oldfieldii	2 4 8 11 12
Oleaceae		orbiculatum	4
Jasminum	524	*nigrum	510
calcareum	321	Scrophulariaceae	
Loganiaceae		*Bellardia	
Logania	12	trixago	A
sp.	13	*Parentucellia	
Mitrasacme	10.11	latifolia	24
paradoxa	10 11	*Zaluzianskya	
Gentianaceae		divaricata	11 12
*Cicendia			
filiformis	25	Orobanchaceae	
		*Orobanche	
Apocynaceae Alyxia		minor	A
buxifolia	11 12	Myoporaceae	
		Eremophila	
Convolvulaceae		brevifolia	8
Convolvulus	5	glabra	13
erubescens	,	subfloccosa	5 11 12
Cuscutaceae		Myoporum	
Cuscuta	910	caprarioides	23
epithymum	910	insulare	13
Boraginaceae			
*Echium		Plantaginaceae	
plantagineum	24	Plantago	0.10
Halgania		drummondii	919
littoralis	13	Rubiaceae	
preissiana	25	Opercularia	
sericiflora	11 12	spermacocea	5
Chloanthaceae		vaginata	26710
Lachnostachys			
eriobotrya	15	Lobeliaceae	
Pityrodia		Isotoma	
atriplicina	A	hypocrateriformis	A
hemigenioides	15	Goodeniaceae	
loxocarpa	12	Brunonia	
verbascina	11 12	australis	A
		Dampiera	The same of the sa
Lamiaceae		altissima	10
Hemiandra	16	lindleyi	10
rubriflora	16	linearis	24
Hemigenia	1		1258910
diplanthera	4	sp.	1250710
Westringia	12	Goodenia	5111222
rigida	13	berardiana	J1112 22

pinnatifida	19	lindleyi	210
Lechenaultia		macranthum	1112
linarioides	16	Helipterum	
Scaevola		manglesii	6710
canescens	A	roseum	3524
humifusa	10	spicatum	2510
lanceolata	235891025	Hyalosperma	
porocarya	31325	glutinosum	
spinescens	589	subsp. glutinosum	10
tomentosa	13	glutinosum	
Velleia		subsp. venustum	28
rosea	6789	Hypochaeris	
		glabra	9
Stylidiaceae		Isoetopsis	
Stylidium		graminifolia	59
bulbiferum	27	Lagenifera	
elongatum	2567810	huegelii	49
emarginatum		Olearia	
subsp. emarginatum	67	homolepis	11 12
leptophyllum	15	*Osteospermum	
petiolare	10	clandestinum	5810
repens	16	Podolepis	5010
Astonos		capillaris	713
Asteraceae		lessonii	A
*Arctotheca		Podotheca	1
calendula	23451025	angustifolia	Α
Brachycome		gnaphalioides	A
iberidifolia	514	Quinetia	Λ
perpusilla	5891112	urvillei	24
sp.	2	*Reichardia	24
Calocephalus			12
drummondii	919	tingitana	13
Calotis		Rutidosis	22
hispidula	6789	multiflora	22
Cephalipterum		Schoenia	0.4
drummondii	4	cassiniana	24
Ceratogyne		Senecio	0.5
obionoides	10 11 20	glossanthus	2.5
Chthonocephalus	10 11 20	hispidulus	11 12
pseudevax	6710	lautus	
sp.	9	ssp. dissectifolius	5 11 12
Cotula	,	*Sonchus	
	EGOE	oleraceus	24
coronopifolia	5625	*Ursinia	
*Dittrichia		anthemoides	11 12
graveolens	A	Vittadinia	
Gilberta	A Trail Same	dissecta	24
tenuifolia	A	Waitzia	
Helichrysum		acuminata	A
ambiguum	5	aurea	24



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