917252

HAMILTON RANGE

The Hamilton Range Land System covers a large area in the central South West and includes most of the mountainous country underlain by Precambrian quartzite, sandstone, schist and phyllite with some conglomerate around Mount Maconochie. It includes a number of prominent north south trending mountain ranges such as the Hamilton, Prince of Wales, Princess, Nicholls, Dohertys, Wilmot, Frankland, Companion, Folded and White Monolith Ranges. Minor occurrences of dolerite on the Hamilton and Frankland-Wilmot Ranges may be erosional remnants of more extensive Jurassic dolerite bodies. The dolerite boulders on the Hamilton Range appear to be loose surficial deposits rather than intrusive bodies.

Some higher parts of the land system were affected by Pleistocene glaciations. Glacial features such as lakes, 'u' shaped valleys, cirques and moraines occur in the Hamilton and Prince of Wales Ranges and around The Spires (most notably The Font) and Mount Curly. The heavily glaciated highland country of the Frankland Range is included in the Arthur Range Land System but mid and lower slopes are included in this land system. Glacial outwash deposits occur on the lower slopes of this Range and also the plains of the Denison River (Derbyshire et al 1965). It appears as if ice flow from the Frankland Range was mainly to the north east where the valleys have typical 'u' shaped profiles while those draining south west have V shaped fluvial profiles. This land system consists of very dissected country with rugged valleys and spurs. Rainforest or mixed forest is usually restricted to the valleys while spurs and exposed slopes have sedgeland/heath or scrub vegetation.

Soils vary markedly across this land system although surface horizons are typically organic. Areas with sedgeland/heath or heath vegetation usually have organic soils over quartzitic gravels.

Forested areas are characteristically dominated by shallow organic horizons over uniform clay loams which often contain mica flecks derived from underlying schists. Shallow organic soils over silty clay loams occur on the highest ridges and crests supporting a mosaic of bolster moorland with islands of heath composed of *Nothofagus cunninghamii*, Eucalyptus *vernicosa*, Eucryphia *milliganii* and scattered Diselma archeri thickets. Peaks are often devoid of vegetation and soil due to the exposed nature of the country. This limits plant growth and prevents soil accumulation except in cracks and crevices. Huon pine was not recorded during this survey but was observed below the high water mark on the rocky banks of the Denison River where it occurs with *Leptospermum riparium.* It is relatively common along eastern slopes of the Prince of Wales Range (Davies 1983).

Gymnoschoenus *sphaerocephalus* typically occurs on slopes up to about 750m on the northern end of the Hamilton Range. This area was burnt in 1982 and it appears that significant amounts of peat were consumed in this fire. The sedgeland/heath-forest boundary examined closer to the Denison River revealed marked differences in soils with deep peat soils over gravel in the former and shallow peat over clay loam mineral soil in the latter. Sclerophyllous vegetation commonly forms a belt between the sedgeland/ heath and rainforest although revegetation by *Nothofagus cunninghamii* appeared to be occurring in the burnt sclerophyllous community. Towards the top of the track which leads to the crest of the Hamilton Range a number of feldmark areas occur where wind swept *Baeckea leptocaulis* dominated heath occurs.

Nature conservation and recreation are the main land uses in this land system. There is a high sheet erosion hazard on slopes and crests with sedgeland/heath vegetation where peats have the potential to dry out and burn.

LAND SYSTEM
HAMILTON RANGE

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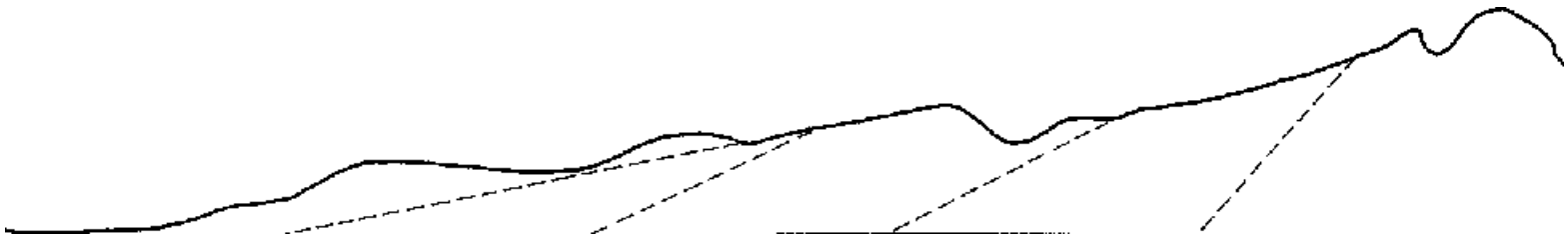
Area(ha): 150924



ALTITUDINAL RANGE (m)	300-600	APPROXIMATE ANNUAL RAINFALL (mm) >2500			
SITE NO.	(35/480/NE)(38/400/-)				
(m) /ASPECT	(69/350/SW)	200/240/N	(36/480/NE) (	203/800/WE	202/870/E
TOPOGRAPHY		North-south trending fold mountain ranges-higher locations glaciated			
Position	Flats, slopes and crests	Slope (Recently burnt location)	Protected slopes and valleys	Upper slopes	Ridges/crests
Typical Slope( )	0-30	20	10-40	20	0-3
Proportion (%)	55	5	20	10	10
GEOLCGY		Percambrian quartzite, sandstone and schist.			
NATIVE VEGETATION Structure	Closed to open-sedgeland/he	Woodland with scrub understorey	dosed to mixed forest (Riverine rainforest)	Closed heath	Bolster moorland/heath
	Gymnoschcenus	Eucalyptus nitida	Nothofagus	Melaleuca squamea	Donatia novae-zelandiae
Floristic	Sprengelia incarnata	Melaleuca squarrosa	Eucryphia lucida	Baeckea leptocaulis	Dracophyllum milliganii
Association	Melaleuca squamea	Leptospermum	Phyllocladus	Persoonia gunnii	Xyris sp.
(See Appendix **1**	Leptospermum nitidum	L. glaucescens	Eucalyptus nitida	Agastachys cdorata	Oreobolus pumilio
for common	Banksia marginata	Cenarrhenes nitida	Anodopetalum	Eucalyptus vernicosa	Epacris serpylli folia
names)	Agastachys odorata	Acacia mucronata	Anopterus glandulosus	Epacris serpyllifolia	Sprengelia incarnata var
	Restio monocephalus		Genarrhenes nitida	Sprengelia incarnata	Drosera arcturi
	Empodisma minus		Blechnum wattsii	Genarrhenes nitida	Carpha curvata
	Pimelea lindleyana		Trochocarpa gunnii	Pimelea lindleyana	Actinotus suffocata
	Baeckea leptocaulis		Archeria eriocarpa	Astelia alpina	Helichrysum pumilum
	Epacris corymbiflora		Hymenophyllun sp.	Monotoca submutica	Nothofagus cunninghamii
	Stylidium		Graminitis billardieri		Eucalyptus vemiccea
	Lycopodium laterale		Agastachys odorata		Eucryphia milliganii.
SOIL Surface(A or P horizon)Cblour (moist) and texture	Black (10 YR 2/1) or dark reddish brown (5 YR 2. 5/2) fibrous peat over black (10 YR 2/1) or very dark	Black (7. 5 YR 2/0) loam, over very dark grey (10 YR 3/1) clay loam	Dark reddish brown (5 YR 2. 5/2) fibrous peat or black (10 YR 2/1) organic clay loam	Dark brown (7. 5 YR 3/2) fibrous peat over a gravelly dark reddish brown (5 YR 3/2) muck peat	Dark reddish grey (5 YR 4/2) fibrous peat
Subsoil (B horizon) colour (wet) and	Very dark greyish brown (10 YR 3/2) clay loam or		Grey (10 YR 5/1) or very dark grey (10 YR 3/1) clay loam	Quartzite gravels in places	Greyish brown (10 YR 5/2) over dark brown (10 YR 3/3) silty clay loam
Primary Profile form	Organic	Gradational	Uniform	Organic	Uniform
Depth surface horizon(n	0. 40	0. 20	0. 05-0. 10	0. 25	0. 10
Typical total depth(m)	0. 50	0. 20	0. 20-0. 40	0. 25	0. 75
Permeability	High	Moderate	Moderate	High	Moderate
LAND USE		Nature conservation, recreation			
HAZARD	High sheet erosion/ Moderate track erosion				Moderate track erosion

Photo 61

Leaning *Baeckea leptocaulis* on a wind-swept ridge below the crest of the Hamilton Range.

Photo 62

Exposed ridges and crests on the Hamilton Range with shallow organic horizons over deep silty clay loams that support bolster moorland and heath.

Photo 63

Lakes Gertrude, Magdalen and Millicent (furthest from camera) were formed during the Pleisocene glaciations The "rounded" topography is typical of ice eroded terrain (Photograph Mr R J Carpenter) This area is in the Lake Vera Land System