

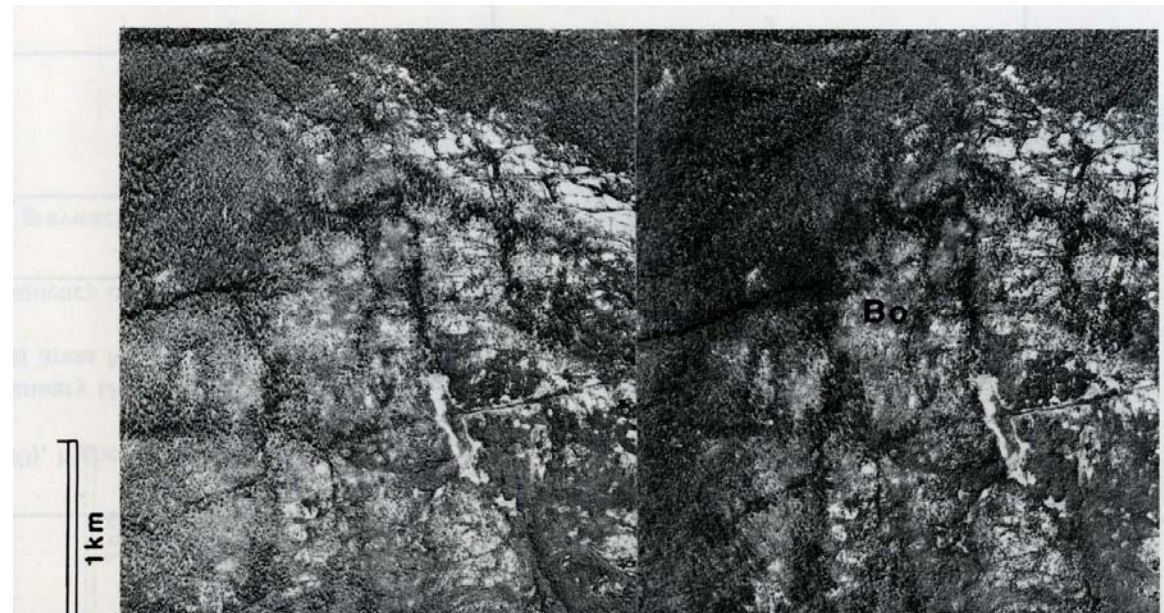
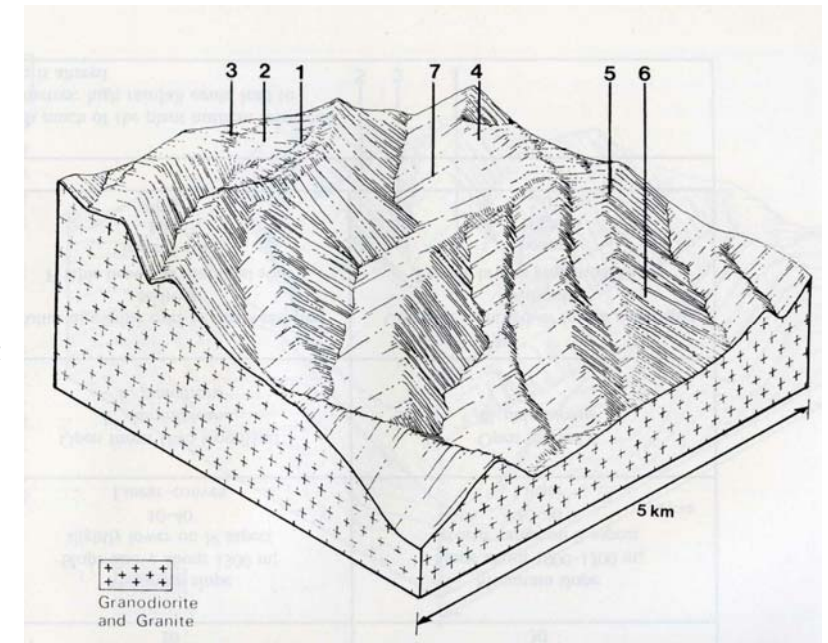
7.3 Buffalo land system

The Mount Buffalo granite massif forms the major part of the land system and consists of steep mountain slopes with small basins and dissected plateaux about 1200 m, with some higher peaks. Precipitous rocky escarpments are a feature of the slopes below the plateaux. The areas had a high rainfall and regular winter snow, which persists into early spring on the higher areas.

On the drier lower slopes, weakly bleached reddish brown gradational soils and coarse sand soils of uniform texture are typical, and gradually change to friable brown gradational soils as the environment becomes moister. The highest areas have organic loam soils, wet peat, dry peat and humified peat soils.

Vegetation ranges from open forest with *Eucalyptus radiata* dominant through *E. delegatensis* forest to *E. dalrympleana* and *E. pauciflora* forest to woodland. On the highest areas *E. pauciflora* woodland is dominant, but the shallow valleys on the plateau carry the typical sub-alpine vegetation patterns of grassland, heathland, mossland and sedgeland.

The coarse-grained soils are highly susceptible to erosion, particularly on compacted areas such as roads. The growing season is very short, which makes the revegetation of bared areas difficult. The highly permeable soils and high rainfall result in a high potential for plant leaching.



BUFFALO LAND SYSTEM Area 133 sq km

CLIMATE Rainfall, mean (mm) Temperature, mean (°C) Seasonal growth limitations	Annual 1250 – 1800; lowest January (70-100), highest June, July, August (170-250); winter snow above 1100 m Annual 7-12; lowest June (1-6); highest January (15-20) Temperature – less than 10 ⁰ C (av): lowest areas April-October, highest areas March-November Precipitation – months less than 50% frequency of effective rain: nil								
GEOLOGY Age, lithology	Devonian granite-granodiorite								
PHYSIOGRAPHY Landscape Elevation range (m) Relative relief (m)	Mountains with high-level hilly plateaux and small basins 300-1700 500 (mountain slopes); 50 (plateau and basin)								
LAND COMPONENT Percentage of land system	1 1	2 2	3 3	4 30	5 14	6 40	7 10	8 <1	
PHYSIOGRAPHY Land form Position on land form Slope range (%) Slope shape	Drainage line - 2 Linear	Valley floor - 2-8 Concave	Valley side slope - 5-10 Concave	Hill Slope above about 1400 m 10-20 Convex	Mountain slope Exposed slope 1100-1400 m 10-40 Linear	Mountain slope Slope below about 1100 m 10-40 Linear	Mountain slope Sheltered slope 110-1400 m 10-40 Linear	Scarp - 40-100 Linear	
NATIVE VEGETATION Structure Dominant species	Low open shrubland <i>Baeckea gunniana</i> , <i>Epacris breviflora</i>	Closed tussock grassland <i>Poa australis</i>	Open heath to closed heath <i>Bassiaea foliosa</i> , <i>Hovea longifolia</i>	Low woodland to open shrubland <i>E. pauciflora</i>	Open forest II to woodland <i>E. dalrympleana</i> , <i>E. pauciflora</i>	Open forest III <i>E. radiata</i> , <i>E. rubida</i> , <i>E. dives</i>	Open forest IV <i>E. delegatensis</i>	Bare to open heathland <i>Leptospermum myrtifolium</i> , <i>Kunzea parvifolia</i>	
SOIL Parent material Description Surface texture Permeability Depth (m)	Organic material accumulations Humified peat Organic loam High 1.5	Colluvial mantle over bedrock Organic loam Organic loam High 0.7	Colluvial mantle over bedrock Organic loam Organic loam High 0.5	Colluvial mantle over bedrock Organic loam Organic loam High 0.5	Colluvial mantle over bedrock Friable brown gradational soils Gravelly loam High 0.7	Colluvial mantle over bedrock Friable brown gradational soils Loam High 1.0	Colluvial mantle over bedrock Friable brown gradational soils Loam High 2.0	Colluvial mantle over bedrock Dry peat soils Sandy loam High 0.2	
LAND USE	Uncleared; recreation; Mount Buffalo National Park								
SOIL DETERIORATION HAZARD Critical land features, processes, forms	Low winter temperatures, short growing season and frost heave on bare soils; high run-off from catchments can result in stream entrenchment and drying of peaty soils				organic-rich soils are susceptible to wind and water erosion	organic-rich soils are susceptible to wind and water erosion	organic-rich soils are susceptible to wind and water erosion	High soil permeability and low chemical fertility, with much of the plant nutrient reserve in the soil in the surface few centimeters; high rainfall could lead to nutrient decline if the natural nutrient cycling is altered; soils compacted on intensive areas will erode	Shallow soil on unweathered rock, much bare rock; high surface run-off; sheet erosion