

Pelion

Stretching across a large section of the extreme west and south west of the study area is the Pelion Land system. Included are areas of land in the vicinity of Cradle Mountain and Mount Ronald Cross. Most information and comments come from aerial photo-interpretation due to poor access. Ground checks have been carried out in the Mount Rufus, Pelion Gap and Pine valley areas. The country rock comprises interbedded sedimentary sequences of Parmeener Supergroup sediments while scattered dolerite scree may be found on some crests. In the Cradle Mountain area minor amounts of Pleistocene glacial till occurs. The western edge of the land system coincides with the Parmeener Supergroup/Precambrian rock geological contact. The higher components usually border on dolerite of the Mount Ossa land system while in the south Pleistocene glacial deposits of the King William land system form the boundary.

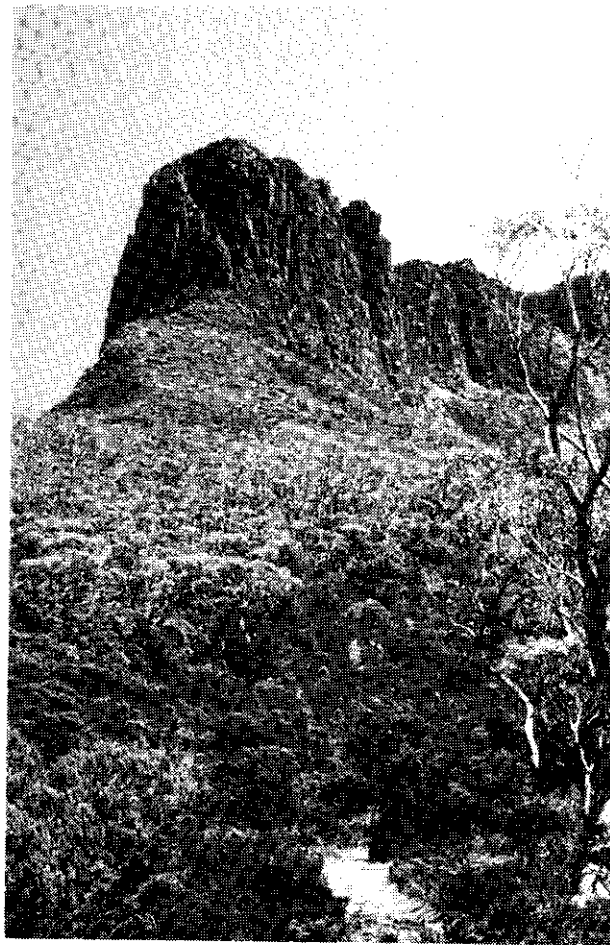
The terrain varies from rugged mountainous areas to undulating plains. At lower altitudes steep, thickly forested dissected river valleys occur (e.g. the upper Murchison and Mersey Rivers). In the Counsel River region, (the extreme southerly extension of the land system), the land has a stepped appearance with occasional rock outcrop. Lower components grade into undulating plains which are probably dominated by tussock grassland and sedgeland. Spurs extending from these plains into the river valleys support similar vegetation, although Eucalyptus delegatensis and E. nitida forests can occur on these ridges. Adjoining the plains are broad, steep slopes with cliffs and rock benches, examples of which can be found below Castle Crag (in the Du Cane Range) Last Hill, Rocky Hill and Pyramid Mountain (in the west of the land system). These slopes may bear scars of glacial erosion such as cirques, while valleys display characteristic "u" shaped glacial morphology. Many of the smaller upper ex-glacial valleys have been reworked and have typical "V" shaped fluvial sections. An ice divide was probably formed by the Last Hill - Pyramid Mountain Ridge between the South Eldon and Collingwood Rivers. The crest component forms a relatively small proportion of the land system and often has cliffs on the lower portions.

Soils are likely to have yellow brown colours on most components and could be overlain by organic horizons in many situations. Gradational soils would almost certainly be more common on better drained components (e.g. steep river valleys). Eucalyptus delegatensis and E. nitida are widespread in areas subjected to recent or frequent burning, and have extended into rainforest which is dominated by Nothofagus cunninghamii, Atherosperma moschatum, Phyllocladus aspleniifolius, Eucryphia lucida and Athrotaxis selaginoides. Eucalyptus subcrenulata has a patchy distribution in these valleys where it may mix with Eucalyptus coccifera and Nothofagus cunninghamii forming a canopy over tall specimens of Richea pandanifolia (e.g. Pine valley). Duplex soils occur on flats and swamps. Organic soils are probably more common in these situations and could support poa tussock grassland or Gymnoschoenus sphaerocephalus sedgelands on the undulating plains below 600 m. On component 3. poorly drained situations on rock benches may support Astelia alpina, Gleichenia alpina, Richea pandanifolia, Restio australis, Empodisma minus, Lepidosperma filiforme and various bolster plants. It is probable that raised sphagnum moss beds occur in some swamps. The dwarf conifer Diselma archeri probably grows around swampy regions together with the conifers Athrotaxis selaginoides and A. cupressoides, while Nothofagus cunninghamii is also likely

to occur. All of these would extend upslope where Nothofagus gunnii occurs on fire protected positions with N. cunninghamii, E. subcrenulata and E. coccifera, forming a dense low thicket. Crests support low shrubland to low open heath with Orites spp. important.

The Pelion Land System includes almost all the Cradle Mountain-Lake St Clair National Park. Land use includes nature conservation and recreation.

Rill and gully erosion are evident along certain sections of bushwalking tracks, for example, the slopes of Mounts Rufus and Doris and between Kia ora hut and the Narcissus Valley on the overland track. Tracks crossing swamps have the potential to promote channeling and possibly rill erosion which effects swamp hydrology especially if bifurcation (of the path) occurs. If vegetation is removed by wildfires soil degradation may occur. At higher altitudes this can have serious implications as revegetation of bare areas is hampered or prevented by frost heave which uproots seedlings.



Cliffs and rocky slopes (southern extent of The Acropolis) of the Mount Ossa Land system which adjoin the upper slopes of the Pelion Land system. The Eucalyptus coccifera 'treeline' in the middle distance occurs at this boundary.



Broad slopes and ridges at higher altitudes are dominated in places by Eucalyptus coccifera, Athrotaxis cupressoides and A. selaginoides. These are usually surrounded by open heath.



Slopes of the Pelion Land System immediately below Mount Doris (Mount Ossa Land System) with well developed coniferous heath (dominated by Diselma archeri) A thicket of Athrotaxis cupressoides occurs at the bottom right — of the photograph. Richea spp. dominate the heath in the background.

LAND SYSTEM

Pelion

864351

Area (ha):
92822

COMPONENT	1	2	3	1	1
PROPORTION(%)	20	30	40	10	
RAINFALL (mm)	Approximate Annual Rainfall: 2000-2500				
GEOLOGY	Parmaener Supergroup Sediments (Upper Carboniferous to Triassic)			olerite scree on surface in places	
TOPOGRAPHY	Rugged mountainous terrain			Pleistocene erosional features	
Position	Steep River Valleys	Undulating Plains/Swamps	Broad Slopes with Cliffs in Places	Crests	
Typical Slope(°)	15-20	0-3	10-20	15-20	
NATIVE VEGETATION Structure	Open Forest with Closed Forest in Places	Tussock Grassland/ Sedgeland/Open Heath	Woodland/heath	Low Shrubland/ Heath	
Floristic Association (See Appendix 1 for common names)	<u>Eucalyptus delegatensis</u> <u>E. dalrympleana</u> <u>E. nitida</u> <u>E. subcrenulata</u> <u>E. coccifera</u> <u>Acacia dealbata</u> <u>Nothofagus cunninghamii</u> <u>Atherosperma moschatum</u> <u>Phyllocladus aspleniifolius</u> <u>Athrotaxis selaginoides</u> <u>Eucryphia lucida</u> <u>Cenarrhene nitida</u> <u>Phebalium squameum</u> <u>Zieria arborescens</u> <u>Prostanthera lasianthos</u>	<u>Gymnoschoenus sphaerocephalus</u> <u>Astelia alpina</u> <u>Restio australis</u> <u>R. complanatus</u> <u>Empodisma minus</u> <u>Richea acerosa</u> <u>R. scoparia</u> <u>R. pandanifolia</u> <u>Gleichenia alpina</u> <u>Boronia citriodora</u> <u>Melaleuca squamea</u> <u>Leptospermum scoparium</u> <u>L. lanigerum</u> <u>L. nitidum</u>	<u>Eucalyptus coccifera</u> <u>E. subcrenulata</u> <u>Orites acicularis</u> <u>O. revoluta</u> <u>Athrotaxis cupressoides</u> <u>Diselma archeri</u> <u>Cyathodes petiolaris</u> <u>Bellenden montana</u> <u>Nothofagus gunnii</u> <u>N. cunninghamii</u> <u>Richea pandanifolia</u> <u>R. scoparia</u> <u>Helichrysum backhousii</u> <u>Astelia alpina</u> <u>Milliganiadensiflora</u> <u>Donatianovae-zelandiae</u>	<u>Orites acicularis</u> <u>O. revoluta</u> <u>Coprosma nitida</u> <u>Epacris gunnii</u> <u>Richea acerosa</u> <u>Cyathodes petiolaris</u> <u>Epacris serpyllifolia</u> <u>Baeckea gunniana</u> <u>Boronia citriodora</u> <u>Diselma archeri</u> <u>Microcachrys tetragona</u> <u>Olearia ledifolia</u> <u>Pentachondra purailla</u>	
SOIL Surface(A)Texture	Organic Loam-Sandy Clay Loam	Peat	Sandy Clay Loam	Clay Loam	
B Horizon(subsoil) Colour (wet) Texture and primary profile	Yellowish brown (10 YR 5/8) to strong brown (7.5 YR 4/6) light clay. Gradational.	Brown/dark brown (10 YR 4/3) to black (10 YR 2/1) light to medium clay. Organic.	Light olive brown (2.5 YR 5/4) to grey/light grey (10 YR 6/1) sandy clay. Duplex.	Stony, gravelly, yellowish brown (10 YR 5/6) light clay. Gradational.	
Permeability	High-Moderate		High-Moderate	High	
Typical depth(m)	>1.00	>0.50	>0.50	>0.20	
Depth(A)Horizon(m)	0.10-0.20	0.10-0.15	0.10	0.10	
LAND USE	Nature conservation, recreation				
HAZARDS	Moderate rill erosion on bushwalking tracks				