

## Lake Augusta

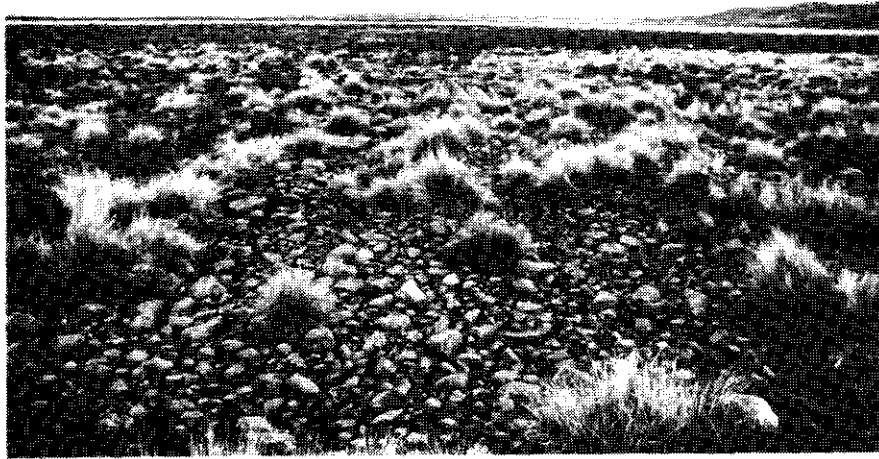
Pleistocene ice caps probably reached their most eastern extent in the Lake Augusta region. Glacial deposits are scattered throughout the area with some lakes containing glacial outwash material while others are strewn with glacial erratics. Lunettes of probable Holocene age are a common feature on the eastern side of many lakes and may have been derived from wind blown glacial material. The rest of the land system consists of treeless undulating highland plains with gentle slopes and broad crests. Jurassic dolerite is the parent material for most of the unconsolidated glacial material in the region. Outcrops of dolerite are common, while limited occurrences of basalt may be found in the east.

The lunettes consist of uniform sands which are often poorly vegetated making them prone to wind erosion. Organic soils are common in poorly drained positions, where they are often underlain by loamy horizons or boulder clays of glacial origin. Organic profiles would undoubtedly be more extensive, if the area had not been subjected to frequent firing over a long period of time. Drier ridge components have stony brown gradational soils on dolerite with similar areas on basalt supporting stony, yellowish brown gradational soil. Most dry ridge components have been severely sheet eroded.

Lakes in this land system are usually surrounded by bogs which support bolster moorland. Common species on this heath/sedge/herbfield are Abrotanella forsterioides, Pterygopappus lawrencii, Astelia alpina, Gleichenia alpina, Empodisma minus, Restio australis, Lepidosperma filiforme and Richea acerosa. Some of these species are also found in adjoining flats where Poa grassland may dominate. According to Jackson (pers. comm.) repeated firing results in the invasion of these grasslands by shrubs such as Helichrysum hookeri and Olearia algida. Well drained ridges are dominated by Orites spp.

Nature conservation, recreation and grazing are the major land uses in this land system which occurs on the eastern extremity of the Central Plateau Protected Area. Rangeland burning associated with grazing has resulted in widespread sheet erosion. Fires are often started in swamps during dry periods. These move onto surrounding ridges where the removal of vegetation leads to sheet erosion. Re-establishment of vegetation is hampered by frost heave which uproots young seedlings. The loss of large volumes of top soil makes revegetation extremely difficult if not impossible. Fires also burn partly decomposed organic matter (duff) from the surface and probably leads to a decrease in soil fertility. There appears to be limited recovery in certain areas with a build up of decomposing organic matter and revegetation by Grevillea australis. This prostrate plant seems to have been relatively successful in establishing on sheet eroded areas.

Organic soils are prone to disturbance by vehicles during wet periods, although many of the tracks are closed by the Lands Department Ranger during winter.



*Severe sheet erosion problems on Poa tussock grassland resulting from more than 100 years of poor land management.*



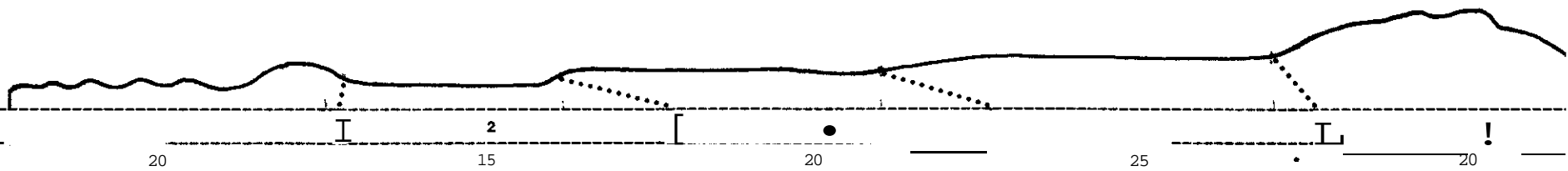
*View from Pine Lake Land System across Lake Augusta Land System and the Great Pine Tier (with Eucalyptus coccifera woodland). Peaks of the Mount Ossa Land System are in the far distance.*

LAND-SYSTEM

Lake Augusta

692421

Area (ha):  
9899



COMPONENT					
PROPORTION(%)	20	15	20	25	20
RAINFALL (mm)	Approximate Annual Rainfall: 1250-1500				
GEOLOGY	Glacial deposits derived from Jurassic dolerite with some dolerite outcrop				Tertiary basalt
TOPOGRAPHY	Undulating plains				
Position	Lakes/Lunettes	Swamps	Poorly Drained Flats	Well Drained Flats	Rocky Ridges
Typical Slope(°)	0-3	0	0-1	0-1	1-3
NATIVE VEGETATION Structure	Open Heath	Bolster Moorland/Closed Heath/Open Heath/Herbfield	Closed Sedgeland/Open Heath	Open Heath/Sedgeland	Open Heath
Floristic Association (See Appendix 1 for common names)	<u>Poa sp.</u> <u>Helichrysum hookeri</u> <u>Brachycome tenuiscapa</u> <u>Olearia algida</u>	<u>Abrotanella forsterioides</u> <u>Pterygopappus lawrencii</u> <u>Astelia alpina</u> <u>Erapodisma minus</u> <u>Restio australis</u> <u>Lepidosperma filiforme</u> <u>Richea acerosa</u> <u>Gleichenia alpina</u>	<u>Empodisma minus</u> <u>Restio australis</u> <u>Poa sp.</u> <u>Richea scoparia</u> <u>Astelia alpina</u> <u>Carpha alpina</u> <u>Helichrysum acuminatum</u> <u>Richea acerosa</u> <u>Boronia citriodora</u> <u>Poa sp.</u> <u>Helichrysum hookeri</u> <u>Olearia algida</u>	<u>Lissanthe montana</u> <u>Richea acerosa</u> <u>Olearia algida</u> <u>Lissanthe montana</u> <u>Restio australis</u> <u>Grevillea australis</u> <u>Epacris petrophila</u>	<u>Orltea acicularis</u> <u>O. revoluta</u> <u>Olearia algida</u> <u>Helichrysum hookeri</u> <u>Grevillea australis</u> <u>Monotoca empetrifolia</u> <u>Cyathodes nitida</u> <u>Lissanthe montana</u> <u>Poa sp.</u>
SOIL Surface(A) Texture	Sand	Peat	Loam (Peat in places)	Loam	Loam
B Horizon(subsoil) Colour (wet) Texture end primary profile form	Dark yellowish brown (10 YR 4/4) undifferentiated sand. Organic sand from 1.4 m. Uniform.	Brown(10 YR 5/3) loam. Organic	Light olive brown (2.5 Y 5/4) to brown (7.5 YR 4/6) clay loam. Gradational.	Dark yellowish brown (10 YR 4/4) clay loam. Gradational.	Stony, gravelly, strong brown (7.5 YR 4/6) to dark yellowish brown (10 YR 4/4) clay loam. Gradational.
Permeability	High		Moderate	High-Moderate	High-Moderate
Typical depth(m)	>1.60	>0.70	>0.50	>0.40	>0.40
Depth(A)Horizon(m)	-	0.25	0.20	0.20	0.15
LAND USE	Nature conservation, grazing, recreation				
HAZARDS	High wind erosion	" "	" "	High sheet erosion	

145.