

772421

Pine Lake

Pine Lake Land System covers two areas in the north of Region 5 immediately south of the plateau rim. It stretches from Western Bluff in the west to Drys Bluff in the east, extending south east of Drys Bluff to Mother Lords Plain. It includes Wild Dog Plains east of Lake Augusta, and February Plains west of Lake Rowallan. The land consists of undulating terrain with rocky ridges, hills and swamps, and is underlain throughout by Jurassic dolerite. Pleistocene glaciations are thought to have affected the landscape around Western and Drys Bluffs, where subsidiary ice caps existed. The country around First Bar Lake and Wild Dog Plain was probably affected by the north eastern extent of the large ice cap centered over the Lakes land system (on the higher plateau surface) to the west.

Most well drained sites are covered by brown gradational soils with loamy textures. Swampy flats and valleys, which have not been subjected to a high fire frequency, support well developed peats that may overlie glacial boulder deposits. These peats often occur on the more gentle slopes west of Pine Lake. Many of the upper slope positions are covered by extensive boulder slopes with the largest boulders often exceeding 2.00 m in diameter. Soil development is limited in these situations but organic loams and clay loams may occur in the interstices.

Areas covered by peat usually have a dense cover of vegetation dominated by *Richea* spp. and bolster plants with dense *Astelia alpina* beds around creeks. Interspersed with this vegetation are *Empodisma minus*, *Restio australis* and *Lepidosperma filiforme*. *Sphagnum cristatum* beds are often found in poorly drained hollows and sometimes form raised bogs (hummocks of sphagnum moss) while scattered stands of *Athrotaxis cupressoides* inhabit fire protected sites. The dwarf conifer *Diselma archeri* would probably be more widespread if fire frequencies were lower. Drier situations are dominated by *Eucalyptus coccifera* woodland, or heathland dominated by *Orites* spp. Boulder slope components are often devoid of vegetation but thickets of *Orites* spp., *Nothofagus cunninghamii* dwarf 'elfin' forest and *Leptospermum lanigerum* do occur. Other common species are, the conifer *Podocarpus lawrencii*, *Olearia pinifolia* and *Coprosma nitida*.

Most of the Pine Lake Land System lies within the Central Plateau Protected Area which is managed as a multiple land use area by the Lands Department. A small area around Lake Mackenzie in the west is managed by the Hydro-Electric Commission for power generation. Most of the land system is utilised for recreation, although a section of land west of Pine Lake has traditionally been used for grazing. The greatest hazard associated with present land use is sheet erosion. Extensive areas are seriously degraded in the Wild Dog Plain area, where up to 0.30 m of topsoil has been lost in drier situations. This form of erosion is usually linked to burning which removes the protective vegetative cover exposing the soil to erosive forces of wind, rain, ice and frost heave. Burning of areas with organic soil seriously reduces the ability (of these areas) to support plants and animals and to absorb and store precipitation. Frequent summer burns have traditionally been associated with grazing practices. A more detailed account of this problem and its significance to the Plateau is contained in the section on hazards.



Recently burnt land in grazing area (Central Plateau Protected Area) close to Wares Marshes. Sheet erosion initiated by fires is evident in the foreground. Attempts are being made by Land Department officials to prevent 'uncontrolled' burning of these areas.



Well developed boulder slope which was probably formed by Pleistocene periglacial action. Pine Lake is in the middle distance.

LAND SYSTEM

Pine Lake

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Area (ha):
24196



| COMPONENT | 1 | 2 | 3 | 4 | 5 |
|---|--|--|--|---|---|
| PROPORTION(%) | 15 | 10 | 40 | 20 | 15 |
| RAINFALL (mm) | Approximate Annual Rainfall: 1500-2000 | | | | |
| GEOLOGY | Jurassic dolerite (Extensive outcrop) | | | | |
| TOPOGRAPHY | Undulating terrain with rocky ridges and crests. Glaciated terrain around Western Bluff | | | | Dry Bluff. |
| Position | Creek Banks/Swamps | Rocky Ridges | Valleys/Flats | Boulder fields | Rocky Crests |
| Typical Slope() | 0 | 15 | 1-5 | 7-10 | 15-20 |
| NATIVE | Open | | | | |
| Structure | Heath/Sedgeland/ Mossland | Open Woodland | Open to Closed Heath/ Sedgeland | Closed to Open Heath with extensive areas devoid of vegetation. | Low Open Woodland/ Open Heath |
| Floristic Association (See Appendix 1 for common names) | <i>Olearia obcordata</i> <i>Helichrysum hookeri</i> <i>Richea scoparia</i> R. <i>acerosa</i> R. <i>gunnii</i> <i>Boronia citriodora</i> <i>Epacris gunnii</i> <i>Poa</i> sp. <i>Restio australis</i> <i>Empodisma minus</i> <i>Lepidosperma filiforme</i> <i>Astelia alpina</i> <i>Abrotanella</i> <i>forsterioides</i> <i>Pterygopappus</i> | <i>Eucalyptus cocclifera</i> <i>Orites revoluta</i> O. <i>acicularis</i> <i>Epacris</i> <i>serpyllifolia</i> E. <i>gunnii</i> <i>Coprosma</i> <i>nitida</i> <i>Leptospermum</i> <i>rupestre</i> <i>Exocarpos</i> <i>humifusus</i> <i>Grevillea</i> <i>australis</i> <i>Helichrysum hookeri</i> <i>Polystichum</i> <i>proliferum</i> | <i>Richea scoparia</i> R. <i>acerosa</i> R <i>gunnii</i> " <i>Astelia alpina</i> <i>Restio</i> <i>australis</i> <i>Empodisma</i> <i>minus</i> <i>Olearia algida</i> <i>Monotoca empetrifolia</i> <i>Cyathodes nitida</i> <i>Helichrysum hookeri</i> <i>Abrotanella</i> <i>forsterioides</i> <i>Pterygopappus</i> <i>lawrencii</i> <i>Poa</i> sp. <i>Athrotaxis</i> | <i>Nothofagus</i> <i>cunninghamii</i> <i>Orites</i> <i>acicularis</i> O. <i>revoluta</i> <i>Leptospermum</i> <i>lanigerum</i> <i>Coprosma</i> <i>nitida</i> <i>Podocarpus</i> <i>lawrencii</i> <i>Olearia</i> <i>pinifolia</i> <i>Telopea</i> <i>truncata</i> <i>Olearia</i> <i>phlogopappa</i> <i>Drimys</i> <i>lanceolata</i> <i>Bellenden</i> <i>montana</i> <i>Helichrysum</i> <i>hookeri</i> <i>Richea</i> | <i>Eucalyptus</i> <i>cocclifera</i> <i>Orites</i> <i>revoluta</i> O. <i>acicularis</i> <i>Helichrysum hookeri</i> <i>Olearia alpina</i> <i>Epacris</i> <i>serpyllifolia</i> <i>Lissanthe montana</i> <i>Exocarpos humifusus</i> <i>Pultenaea</i> <i>fasciculata</i> <i>Boronia</i> <i>pilosa</i> <i>Oxylobium</i> |
| SOIL | Peat | Loam | Peat | Organic Loam - Clay Loam | Loam - Silty Loam |
| Surface(A)Textu B | Gravelly, dark brown (10 YR 3/3) to strong brown (7. 5 YR 4/6) clay. Boulder clay in | Dark reddish brown (5 YR 3/4) to dark brown (10 YR 3/3) clay loam. | Mottled light grey (5 Y 7/2) yellowish brown (10 YR 5/5) red (2. 5 YR 4/8) | Stony, gravelly, strong brown (7. 5 YR 4/6) to yellowish brown (10 YR 5/6) to very dark brown (10 YR | Brown/dark brown (7. 5 YR 4/4) to strong brown loam to clay loam. |
| Permeability | | High | | High | High |
| Typical depth(m) | >0. 40 | >0. 30 | >0. 50 | >0. 50 | 0. 10-0. 50 |
| Depth(A)Horizon(A) | 0. 20-0. 40 | 0. 05-0. 10 | 0. 30-0. 40 | 0. 10-0. 20 | 0. 05-0. 10 |
| LAND USE | Grazing/ nature conservation, recreation, hydro-electric power generation | | | | |
| HAZARDS | | | High sheet | | |