

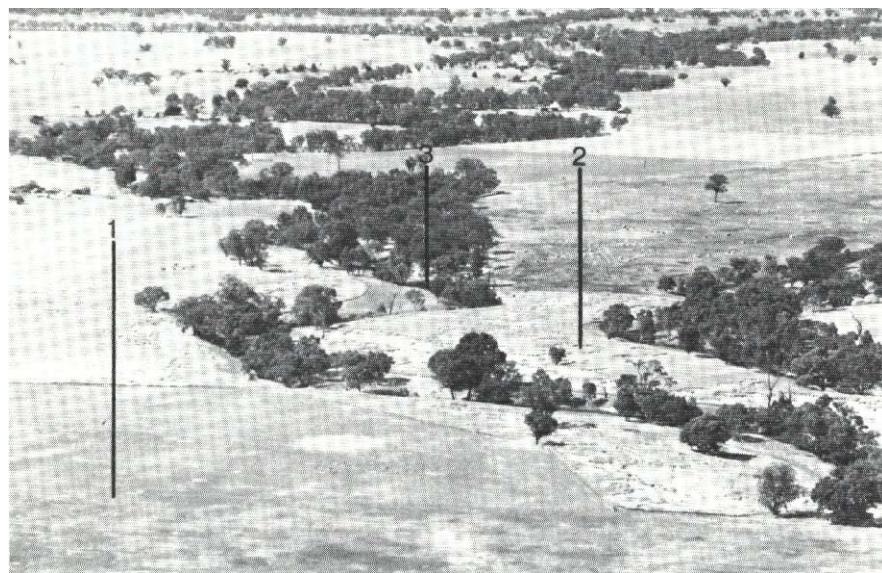
7.2 Avoca land system

Quaternary alluvium fringes the Avoca River from south of Amphitheatre to the Avoca township. Further north a broad plain includes the junction with Mountain Creek.

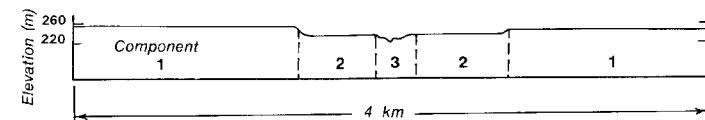
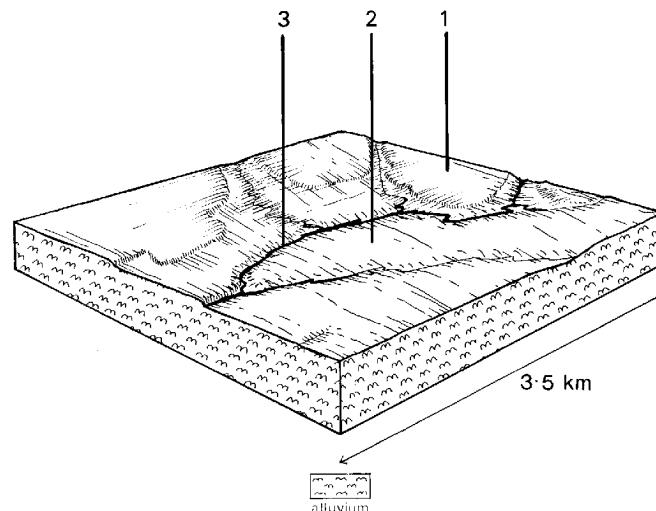
The highest terrace predominates, with sodic duplex soils originally supporting an open woodland of *Eucalyptus melliodora* and *E. microcarpa*.

The area has been largely cleared to make way for crops and pastures. The tree-lined roads and meandering watercourses, together with isolated trees in the paddocks, present an attractive valley landscape contrasting with the steep forested slopes of the Pyrene Range nearby.

The land is comparatively stable. However, cultivation, trampling by livestock and other activities have compacted the original moderately structured surfaces, resulting in increased run-off and reduced plant vigour. Minor saline seeps occur in narrow alluvial terraces flanked by cleared parts of the Pyrene Range.



River red gums (*Eucalyptus camaldulensis*) line many of the water courses.

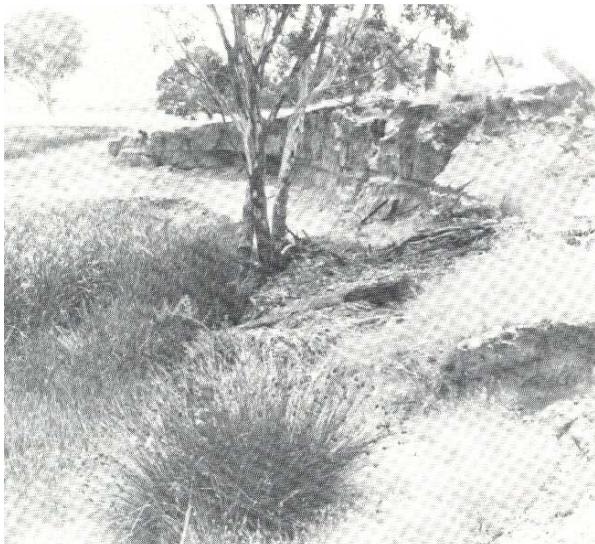


AVOCA LANDSYSTEM Area 133 sq. km.

CLIMATE Rainfall (mm) Temperature (°C) Seasonal growth limitations	Annual, 535-600; lowest January (26), highest August (60) Annual, 14; lowest July (8), highest February (20) Temperature: less than 10°C (av.) June-August Rainfall: less than potential evapotranspiration September-April		
GEOLOGY Age, lithology	Quaternary alluvium		
PHYSIOGRAPHY Elevation range (m) Relative relief (m) Drainage pattern Drainage density (km/sq. km) Land form	220-280 5 Dendritic 2.2 Flat plain		
LAND COMPONENT Percentage of land system	1 80%	2 15%	3 5%
PHYSIOGRAPHY Position on land form Slope (typical) and range (%) Slope shape	Highest level 1,0-1 Linear	Middle terrace 1,0-1 Linear	Present flood plain 1,0-1 Linear
NATIVE VEGETATION Structure Dominant species	Open woodland <i>E. microcarpa</i> <i>E. melliodora</i>	Open woodland <i>E. melliodora</i> <i>E. camaldulensis</i>	Open forest <i>E. camaldulensis</i>
SOIL Parent material Description Classification Surface texture Surface consistence (dry) Depth (m) Nutrient status Available soil water capacity	Site 909 Alluvium Red sodic duplex soils Dr 3.42-2/1/026 Fine sandy loam Slightly hard >2 Very low surface, low subsoil Low surface, moderate subsoil	Alluvium Yellowish brown duplex soils Db 1.32 - 2/ 1 /010 Sandy loam Slightly hard >2 Low surface, moderate subsoil Moderate throughout	Recent alluvium Grey gradational soils (variable) Gn 2.45 - 412/ 005 Silty clay loam Moderately hard >2 Moderate throughout High throughout
Perviousness to water Drainage Exposed stone Dispersibility Slaking tendency	Moderate Well drained Nil Moderate Moderate	Moderate Moderately well drained Nil Low Low	Slow Poorly drained Nil Nil Nil
PRESENT LAND USE	Cropping, grazing	Cropping, grazing	Grazing

Land deterioration hazards - Avoca land system

Disturbance	Component	Affected process and trend	Primary resultant deterioration		Primary resultant off-site process
			Form	Susceptibility	
Altered vegetation -reduced leaf area, rooting depth, perenniality	1,2	Reduced transpiration, increased leaching	Nutrient decline	Low	Increased movement of water and salts to groundwaters
Cultivation, increased trafficking, trampling	1,2	Increased soil compaction	Structure decline	Moderate	Increased run-off
Increased run-on	3	Increased soil detachment	Streambank erosion and flooding	Low	Increased sediment loads
Raised water table	3	Increased evaporation	Soil salting	Low	Increased salinity of surface waters



Streambank erosion (above) is an active process during flood periods.



Shallow saline water tables caused by excessive clearing in the catchment severely reduce the productivity of the fertile alluvial soils.