

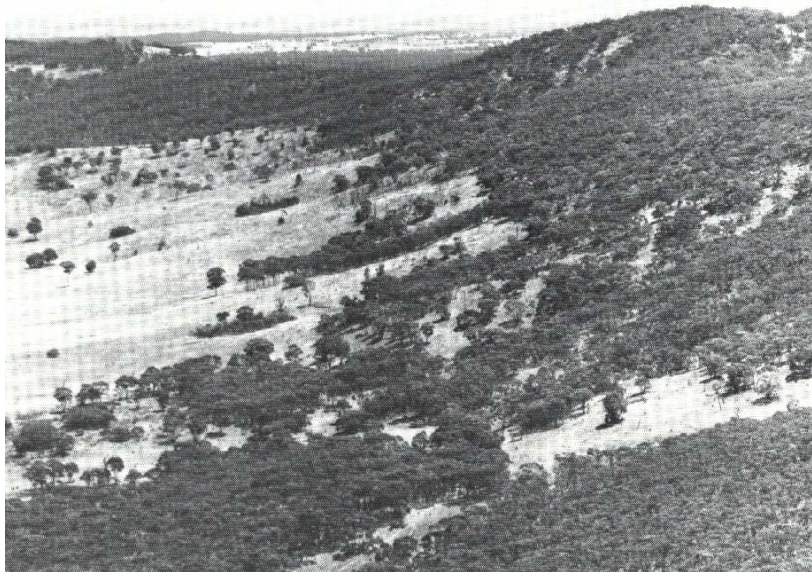
7.4 Bealiba Range land system

The Bealiba Range, Mount Hooghly and the Black Ranges are all part of the metamorphic aureole associated with the Dunluce granite mass. To the west of the Avoca River, isolated hills are remnants of the same aureole.

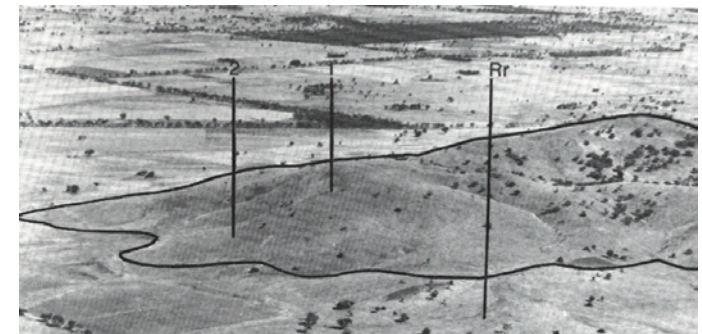
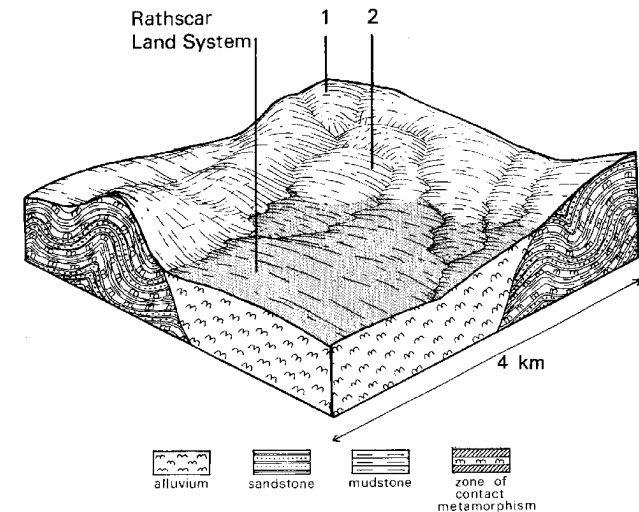
The slopes have shallow stony soils with some remnants of the original open forests dominated by *Eucalyptus macrorhyncha*, with *E microcarpa* on the lower slopes.

The cleared areas are used for grazing, but the shallow soils and the low rainfall inhibit pasture improvement. Native pastures of low productivity prevail.

The change in land use from open forest to native pastures has increased both runoff and mobilisation of salts, with serious consequences in areas adjoining these hills.



Some areas have retained the native forest vegetation.



Complete removal of trees from these hills (right) leads to increased deterioration of adjacent areas.

BEALIBA RANGE LAND SYSTEM Area15sq.km

CLIMATE Rainfall (min) Temperature (°C) Seasonal growth limitations	Annual, 430-500; lowest January (22), highest August (50) 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	Ordovician sandstone and mudstone	
PHYSIOGRAPHY Elevation range (m) Relative relief (m) Drainage pattern Drainage density (km/ sq. km) Land form	240-450 20 Dendritic 0.4 Hill (metamorphic aureole)	
LAND COMPONENT Percentage of land system	1 75%	2 25%
PHYSIOGRAPHY Position on land form Slope (typical) and range(%) Slope shape	Upper slope 25, 15-30 Convex	Lower slope 10, 5-15 Linear
NATIVE VEGETATION Structure Dominant species	Open forest <i>E. microcarpa</i> <i>E. polyanthemos</i> <i>E. goniocalyx</i>	Open forest <i>E. microcarpa</i>
SOIL Parent material Description Classification Surface texture Surface consistence (dry) Depth (m) Nutrient status Available soil water capacity Perviousness to water Drainage Exposed stone Dispersibility Slaking tendency	Sandstone and mudstone Shallow stony uniform loam soils U m 5.21-3,11 / 020 Stony loam Soft 0-0.1 Very low throughout Very low throughout Rapid Excessively drained Abundant Nil Nil	Sandstone and mudstone Shallow stony gradational soils Gn 3.14-2, / 1 / 010 Sandy clay loam Slightly hard 01-0.5 Very low throughout Low Moderate Well drained Common Nil Low
PRESENT LAND USE	Forestry, grazing	Forestry, grazing

Land deterioration hazards - Bealiba Range 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, deep percolation	Nutrient decline	Low	Movement of water and salts to groundwaters
Reduced soil surface cover	1,2	Increased soil detachment	Sheet erosion	High	Increased flash flows and sediment loads
Cultivation, increased trafficking, trampling	1,2	Increased soil compaction	Structure decline	Low	Increased flash flows and sediment loads



Rabbit numbers vary according to the season, but their presence is synonymous with overgrazing and a reduced rate of scrub regeneration.



Ring-barking of trees and overgrazing the native grasses has caused extensive sheet erosion on the steep slopes, as well as gully erosion and salting problems lower in the landscape.