

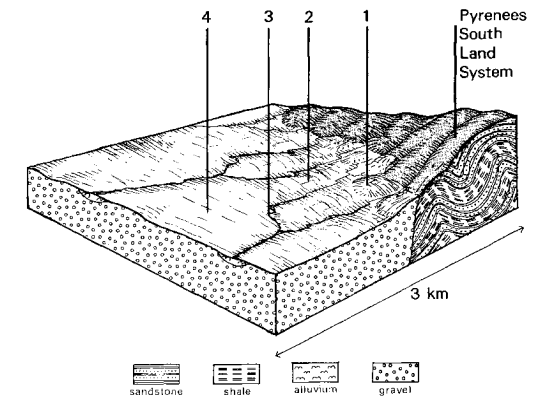
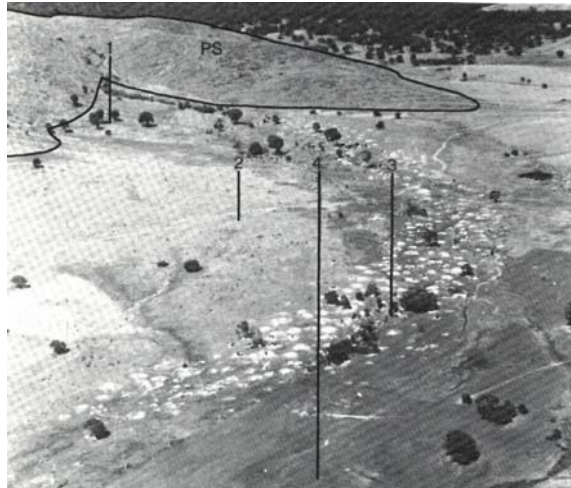
## 7.17 Percydale land system

Alluvial aprons of Tertiary gravelly material along the base of the Pyrenees Range between Avoca and Stuart Mill have been eroded to produce a rolling landscape.

Highly weathered duplex soils of low fertility occur on the upper slopes, with a characteristic low heathy woodland vegetation dominated by *Eucalyptus goniocalyx* and *E macrorhyncha*. Duplex soils on the middle and lower slopes were normally covered with predominantly *E microcarpa* woodlands, but these have been largely removed.

Gravel deposits are of value for road material, but sheet erosion from stripped areas is a problem during revegetation. The hardpan limits perviousness and soil water storage on the middle and lower slopes. However, with adequate fertiliser applications, improved pastures are commonly grown.

As in other land systems on deeply weathered sediments, removal of the remaining trees to make way for agriculture would create a severe hazard-of increased salinisation in the lower drainage lines.



*The gold-diggings of the 1850s; are still clearly visible along the drainage floor (left). The original woodland of grey box (*E. microcarpa*) and yellow gum (*E. leucoxyton*) has been replaced with improved pastures.*

PERCYDALE LAND SYSTEM Area 167 sq. km

<b>CLIMATE</b> Rainfall (mm) Temperature (°C) Seasonal growth limitations	Annual, 500~625; lowest January (26), highest July (74) Annual, 14; lowest July (8), highest February (20) Temperature: less than 10 <sup>0</sup> C (av.) June-August Rainfall: less than potential evapotranspiration September-April			
<b>GEOLOGY</b> Age, lithology	Tertiary river gravel and limited Quaternary alluvium			
<b>PHYSIOGRAPHY</b> Elevation range (m) Relative relief (m) Drainage pattern Drainage density (km/ sq. k m) Land form	240-360 5 Dendritic 1.5 Alluvial apron			
<b>LAND COMPONENT</b> Percentage of land system	1 25%	2 45%	3 10%	4 20%
<b>PHYSIOGRAPHY</b> Position on land form Slope (typical) and range(%) Slope shape	Ridge crest and upper slope 2,0-5 Convex	Middle slope 3,2-5 Linear	Drainage floor 1,1-2 Concave	Lower slope 1,0-1 Linear
<b>NATIVE VEGETATION</b> Structure Dominant species	Heathy low woodland <i>E. goniocalyx</i> <i>E. macrorhyncha</i> <i>E. polyanthemus</i> <i>E. melliodora</i>	Heathy woodland <i>E. microcarpa</i> <i>E. leucoxylon</i> heaths	Woodland <i>E. microcarpa</i> <i>E. leucoxylon</i>	Woodland <i>E. camaldulensis</i> <i>E. melliodora</i> <i>E. microcarpa</i>
<b>SOIL</b> 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	Fluviatile gravelly deposits Mottled red duplex soils, overlying siliceous hardpan Dy 5.21-211/030 Fine sandy loam Soft 1 ~ 1.5 Very low throughout Low surface, moderate subsoil Slow Somewhat excessively drained Slight Low Moderate	Fluviatile gravelly deposits Red duplex soils overlying siliceous hardpan Dr 3.41-3/1/014 Loam Slightly hard 0-5-1 Low throughout Low surface, moderate subsoil Slow Well drained Nil Low Moderate	Alluvium Yellow sodic duplex soils Dy 3.32-3/ 11005 Loam Moderately hard 1.5-2 Low surface, moderate subsoil Low surface, moderate subsoil Slow Poorly drained Nil High Low	Site 908 Fluviatile gravelly deposits Yellowish brown sodic duplex soils overlying siliceous hardpan Dy 3,42-1111034 Loamy sand Soft >2 Very low surface, low subsoil Low surface, moderate subsoil Slow Moderately well drained Nil High Low
<b>PRESENT LAND USE</b>	Gravel extraction, grazing	Grazing	Grazing	Grazing, cropping

**Land deterioration hazards - Percydale 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 Reduced soil surface cover	1,2,4	Reduced transpiration, increased leaching	Nutrient decline	Low	Movement of water and salts to groundwater
	1,4	Increased soil detachment	Sheet erosion	Low	Increased flash flows and sediment loads
	2,3	Increased soil detachment	Sheet erosion	Moderate	Increased flash flows and sediment loads
Cultivation, increased trafficking, trampling	2,3	Increased soil compaction	Structure decline	Low	Increased flash flows and sediment loads
Increased soil disruption and run-on Raised water table	3	Increased subsoil detachment	Gully erosion	Moderate	Increased flash flows and sediment loads
	3	Increased evaporation	Soil salting	Moderate	
	4	Increased evaporation	Soil salting	Low	



*Salt-affected areas increase in size as the natural vegetation is killed off.*



*The uneven surface and scattered stony material of the gold-diggings degrade these areas to grazing land of low productivity.*