

PO4: Parapanic, Humosesquic, Semiaquic Podosol

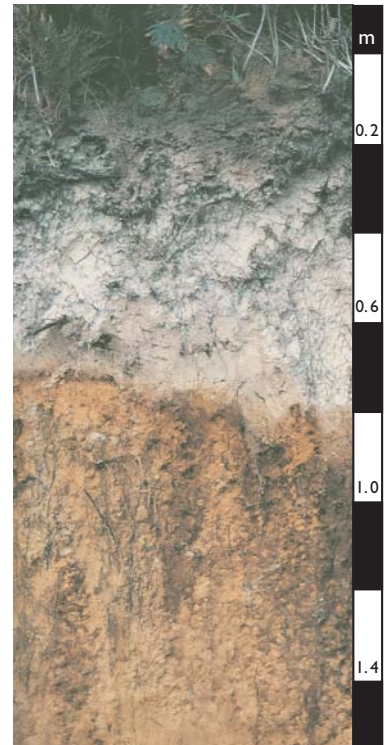
General description of the soil

A Podosol with short-term saturation and a strongly coherent, variably cemented sandy Bh horizon (coffee rock).

Distribution:	A common soil found on low dunes and swales in the main Australian Podosol areas.
Typical land use:	Swales are often cleared and sown to improved pastures with very sparse grazing on the adjacent dunes.
Common variants:	Proportions of Bh and Bs components are variable as is thickness of the A2e horizon.
World Reference Base:	Albic Arenosol (incomplete data).
Other names:	Podzols.

Environment and location of the example profile

Landform:	Narrow low dune.
Parent material or substrate:	Quaternary aeolian sand.
Drainage class:	Well-drained.
Surface condition:	Loose.
Site disturbance:	Very sparse grazing.
Native vegetation:	Mallee (<i>Eucalyptus kitsonia</i>) open scrub, uncleared on the dunes.

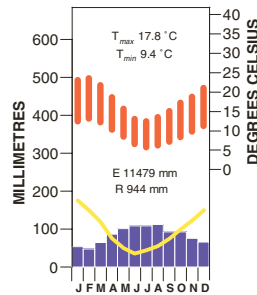


Bald Hills area, South Gippsland, Victoria

Site location



Site climate



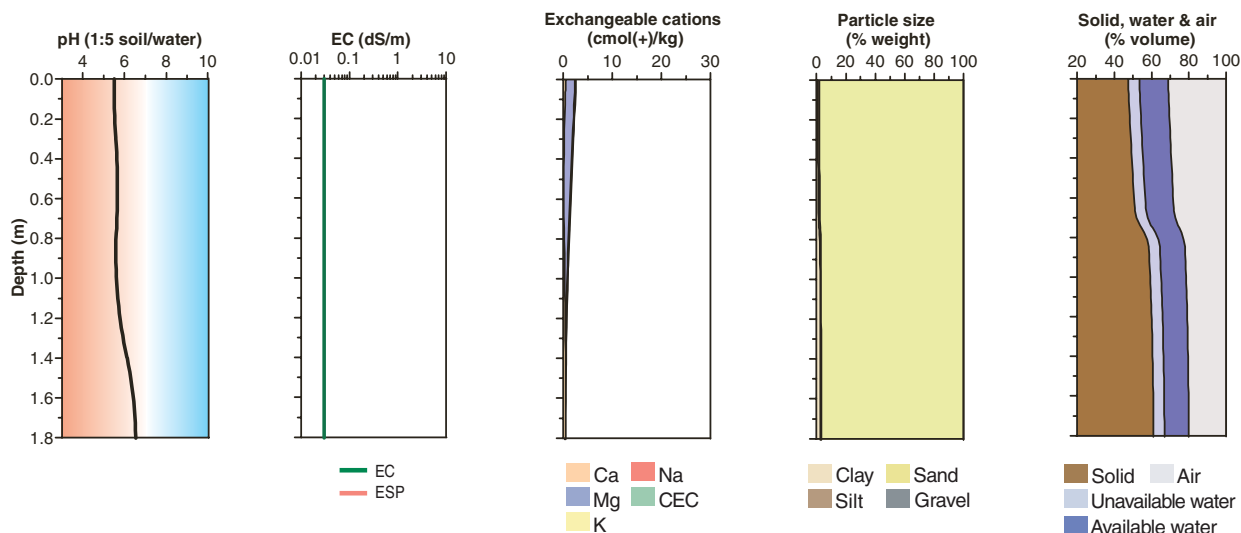
Soil morphology

Horizon	Depth (m)	Colour	Mottles	Texture	Structure			Consistence	Coarse fragments	Segregations	Boundary
					Grade	Shape	Size				
A1	0.00–0.30	dark grey (10YR 4/1)	–	loamy sand	single grain	–	–	loose	–	–	clear
A2e	0.30–0.75	light grey (10YR 7/2)	–	sand	single grain	–	–	–	–	–	clear wavy
Bhs	0.75–1.40	strong brown (7.5 YR 5/8) and dark reddish brown (5YR 3/3)	tongues of variably cemented coffee rock	sand	massive	–	–	strong	–	–	diffuse
C	1.40+	brownish yellow (10YR 6/6)	–	sand	single grain	–	–	–	–	–	–

Soil chemical and physical properties

Horizon	Sample Depth (m)	pH H ₂ O ^A	pH CaCl ₂ ^B	Elect. Cond. dS/m ^A	CaCO ₃ %	Org. C % ^A	Extr. P mg/kg	Tot. P %	Tot. K %	Cation exchange properties ¹ cmol(+)/kg							ESP %	Bulk dens. Mg/m ³	Particle size % ^C			
										Ca	Mg	K	Na	H+Al	CEC	ECEC			CS	FS	Silt	Clay
A1	0.00–0.30	5.5	4.2	< 0.05		0.5				0.1	1.6	0.1	0.1					18	77	1	1	
A2e	0.30–0.75	5.7	4.4	< 0.05																		
Bhs	0.75–1.40	5.6	4.8	< 0.05						0.4	0.1	0.1	< 0.1					20	71	1	3	
C	1.40+	6.5	5.5	< 0.05																		

Key profile properties



General qualities of the soil

Infiltration:	Rapid.
Available water store:	Small to large depending on the depth to the pan.
Permeability:	High to very high above the pan.
Physical root limitations:	Effective rooting depth may be restricted by the coffee rock pan.
Erosion hazard:	The surface soil is prone to wind erosion if vegetation cover is removed.
Nutrient availability:	Very low fertility. Naturally deficient in nitrogen, phosphorus, sulfur, potassium, calcium and trace elements.
Toxicities:	None apparent.



This Semiaquic Podsol occurs on the broad interdune swales that lie to the east of the younger encroaching dune system, South Gippsland, Victoria.

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