

DE8: Humose-Acidic, Mesotrophic, Brown Dermosol

General description of the soil

A Brown Dermosol with a structured, friable B horizon in which the primary peds part to granules (2–5 mm). A strongly acid humose horizon is also a feature.

Distribution:	This soil is common in the elevated hilly to mountainous regions of north and north-east Tasmania and the subalpine regions of New South Wales and Victoria.
Typical land use:	National parks and state forests.
Common variants:	B horizon colours may be reddish brown and textures may be more sandy on steep sites.
World Reference Base:	Humic Acrisol.
Other names:	Some occurrences have been called Yellow Podzolic Soils.

Environment and location of the example profile

Landform:	Steep mountains.
Parent material or substrate:	Devonian adamellite.
Drainage class:	Well-drained.
Surface condition:	Soft.
Site disturbance:	Minor.
Native vegetation:	Rainforest.

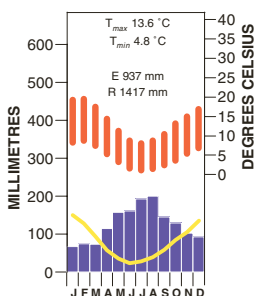


North-east of Launceston, Tasmania

Site location



Site climate



Soil morphology

Horizon	Depth (m)	Colour	Mottles	Texture	Structure			Consistence	Coarse fragments	Segregations	Boundary
					Grade	Shape	Size				
A1	0.00–0.14	black (10YR 2/1)	2–10% dark yellowish brown (10YR 4/4) distinct worm casts	sapric loam	moderate	granular	2–5 mm	weak (moist)	2–10% angular quartz (2–6 mm)	–	clear
AB	0.14–0.27	dark brown (7.5YR 3/2)	10–20% very dark brown (10YR 2/2) distinct worm casts	coarse sandy clay loam	moderate	granular	2–5 mm	weak (moist)	2–10% angular quartz (2–6 mm) and 2–10% subangular granite (20–60 mm)	–	clear
B1	0.27–0.56	brown (10YR 4/3)	10–20% very dark brown (10YR 2/2) distinct (5–15 mm) and 2–10% dark yellowish brown (10YR 4/4) distinct (5–15 mm)	heavy coarse sandy clay loam	weak parting to moderate	subangular blocky parting to granular	10–20 mm parting to 2–5 mm	weak (moist)	2–10% (20–60 mm) and 10–20% (60–200 mm) subangular granitic	–	gradual
B2t	0.56–1.04	dark yellowish brown (10YR 4/4)	10–20% strong brown (7.5YR 5/6) weathered substrate faint (<5 mm)	coarse sandy light clay	weak parting to moderate	subangular blocky parting to granular	10–20 mm parting to 2–5 mm	weak (moist)	20–50% angular quartz (6–20 mm)	–	gradual
C	1.04–1.20+	parent material		–	–	–	–				

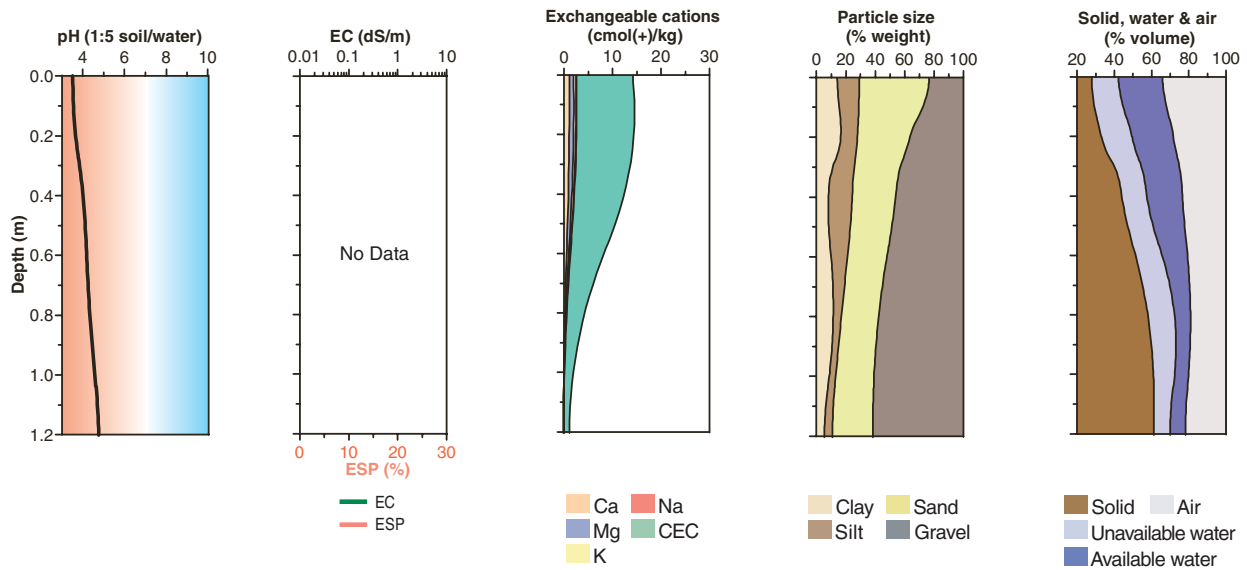
Soil chemical and physical properties

Horizon	Sample Depth (m)	pH H ₂ O ^A	pH CaCl ₂	Elect. Cond. dS/m	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 % ^{D*}			
										Ca	Mg	K	Na	H+Al ^B	CEC			ECEC ^A	CS	FS	Silt
A1	0.00–0.14	3.5				9.2				1.0	0.9	0.4	0.2	11.3		14	–	0.6	62	19	19
AB	0.14–0.27	3.6				8.2												0.6	55	15	30
B1	0.27–0.56	4.1				4.6												0.8	54	33	12

Horizon	Sample Depth (m)	pH H ₂ O ^A	pH CaCl ₂	Elect. Cond. dS/m	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 % ^{B*}			
										Ca	Mg	K	Na	H+Al ^B	CEC			ECEC ^A	CS	FS	Silt
B2t	0.56-1.04	4.3				2.7				0.1	0.1	0.1	0.1	2.9		3	-	1.0	59	9	32
C	1.04-1.20	4.8				0.3													73	15	12

* Coarse sand (CS) fraction includes fine sand (FS).

Key profile properties



General qualities of the soil

Infiltration:	Rapid
Available water store:	Moderate and varies according to depth.
Permeability:	Very high to high lower in the profile.
Physical root limitations:	None.
Erosion hazard:	Moderate but may overlie highly erodible weathered parent material.
Nutrient availability:	Organic matter is high in the surface soil and moderate in the subsoil. Phosphorus is high throughout the soil but subsoils often have high phosphorus retention.
Toxicities:	None apparent.



Rainforest in the steep granite landscapes of north-east Tasmania

Acknowledgements: Soil image, soil description and laboratory data: Forestry Tasmania. Profile 11.4 from Grant et al. (1995). Landscape image: Alan Moyle.