

KU3: Humose, Dystrophic, Brown Kurosol

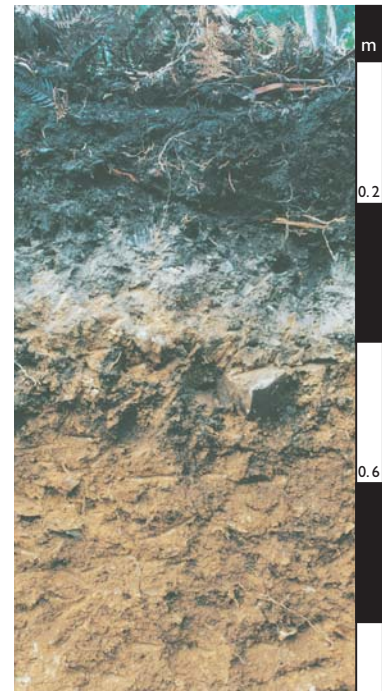
General description of the soil

A strongly acid, texture-contrast soil with a low base status (i.e. Dystrophic) in the major part of the brown clayey B2 horizon. The A1 horizon is dark and organic (i.e. Humose).

Distribution:	Wetter highland areas of Tasmania and in similar parts of Victoria.
Typical land use:	Forestry and nature conservation.
Common variants:	The bleaching of the A2 may vary from conspicuous to none.
World Reference Base:	Abruptic Acrisol.
Other names:	Previously related to Yellow Podzolic soils.

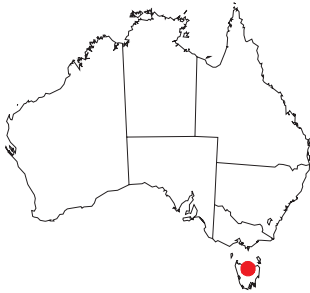
Environment and location of the example profile

Landform:	Steep hills.
Parent material or substrate:	Precambrian sandstone.
Drainage class:	Moderately well-drained.
Surface condition:	Soft.
Site disturbance:	Selective logging.
Native vegetation:	Wet sclerophyll forest dominated by Eucalyptus species.

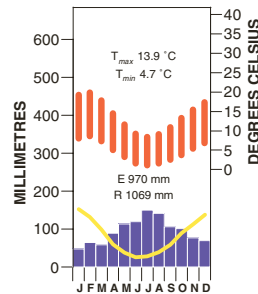


Devonport district, northern Tasmania

Site location



Site climate



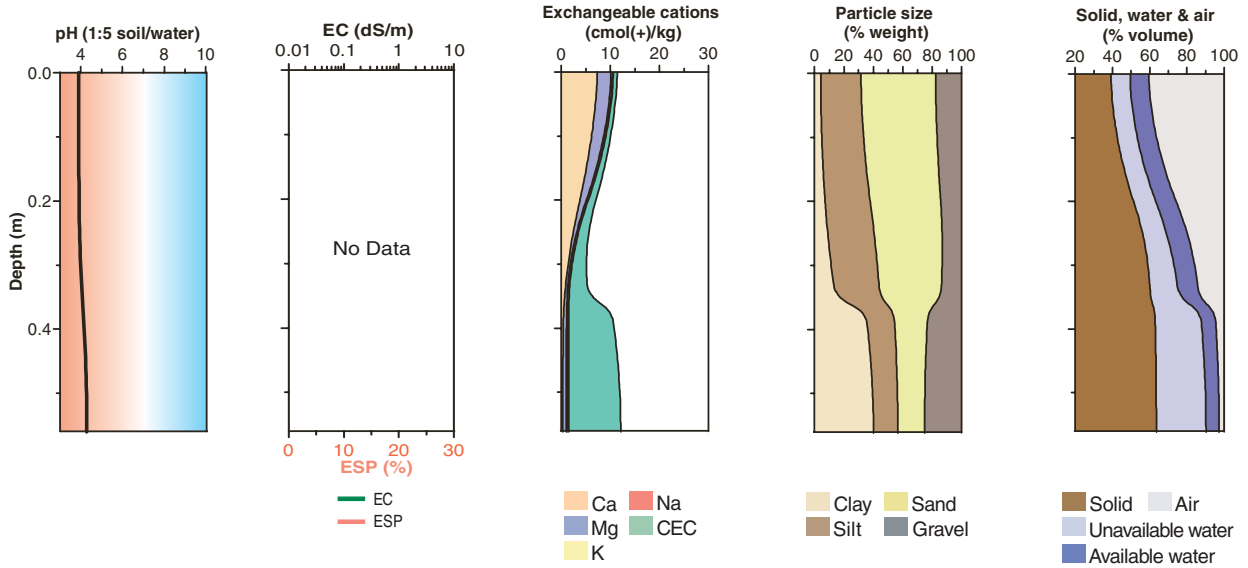
Soil morphology

Horizon	Depth (m)	Colour	Mottles	Texture	Structure			Consistence	Coarse fragments	Segregations	Boundary
					Grade	Shape	Size				
A1	0.00–0.20	black (10YR 2/1)	–	sapric loam				very weak (moist)	2–10% angular sandstone (60–200 mm) and <2% angular quartz (6–20 mm)	–	clear
A2j	0.20–0.36	dark greyish brown (10YR 4/2)	20–50% grey (10YR 6/1) distinct (15–30 mm)	heavy fine sandy clay loam				firm (moist)	2–10% angular sandstone (60–200 mm) and <2% angular quartz (6–20 mm)	–	abrupt
B21t	0.36–0.56	dark yellowish brown (10YR 4/6)	20–50% dark brown (10YR 3/3) worm casts prominent (5–15 mm)	light medium clay				weak (moist)	10–20% angular sandstone (60–200 mm) and <2% angular quartz (6–20 mm)	10–50% prominent humus coatings	gradual
B22t	0.56–0.85	dark yellowish brown (10YR 4/6)	2–10% dark yellowish brown (10YR 4/4) worm casts distinct	light medium clay				firm (moist)	10–20% angular sandstone (60–200 mm) and <2% angular quartz (6–20 mm)	<10% distinct humus coatings	clear
B3	0.85–1.20	light olive brown (2.5Y 5/6)	–	light clay				firm (moist)	50–90% angular sandstone (60–200 mm) and 2–10% angular quartz (20–60 mm)	–	sharp
R	1.20+	sandstone bedrock									

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 ^A						ESP %	Bulk dens. Mg/m ³	Particle size % ^A				
										Ca	Mg	K	Na	H+Al ^B	CEC			ECEC ^A	CS	FS	Silt	Clay
A1	0.00–0.20	3.9				11				7.4	2.0	0.2	0.2	0.8		11	–		26	35	34	6
A2j	0.20–0.36	3.9				2.7				0.6	0.5	0.1	0.3	1.7		3	–		24	29	37	10
B21t	0.36–0.56	4.3				3.2				0.2	0.8	0.3	0.2	11.0		13	–		12	12	22	54

Key profile properties



General qualities of the soil

Infiltration:	Rapid.
Available water store:	Small due to coarse fragments and shallow soil.
Permeability:	High decreasing to moderate lower in the profile.
Physical root limitations:	The dense clay subsoil may inhibit some root development and saturation may occur in the A2j horizon.
Erosion hazard:	Moderate to high when cleared or disturbed.
Nutrient availability:	Phosphorus amounts are moderate throughout. Moderate amounts of nitrogen occur in the surface soil but is lacking in the subsoil. Organic matter is very high in the surface horizon and moderate at depth.
Toxicities:	None apparent.



Rolling to steep sandstone hills with wet sclerophyll forest during a very dry summer, northern Tasmania

Acknowledgements: Soil image, soil description and laboratory data: Forestry Tasmania. Profile 4.2 from Grant et al. (1995). Landscape image: Alan Moyle.