

Project Name: BAGO-MARAGLE FOREST SOIL SURVEY
Project Code: BGM_FSS **Site ID:** 0164 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	P. Ryan	Locality:	
Date Desc.:	05/05/97	Elevation:	1279 metres
Map Ref.:	Sheet No. : 8526 DGPS	Rainfall:	No Data
Northing/Long.:	6034044 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	617052 Datum: AGD66	Drainage:	No Data

Geology

ExposureType:	No Data	Conf. Sub. is Parent. Mat.:	Probable
Geol. Ref.:	Od	Substrate Material:	Schist

Land Form

Rel/Slope Class:	No Data	Pattern Type:	No Data
Morph. Type:	Mid-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	27 %	Aspect:	270 degrees

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Acidic Dystrophic Red Kandosol Medium Slightly gravelly Clay-loamy Clayey Very deep		Principal Profile Form:	Gn2.11
ASC Confidence:		Great Soil Group:	Red earth

All necessary analytical data are available.

Site Disturbance: No effective disturbance. Natural

Vegetation:

Surface Coarse Fragments:

Profile Morphology

O1	0 - 0.03 m	Organic Layer; ;
A1	0.03 - 0.13 m	Dark reddish brown (5YR2.5/2-Moist); Biological mixing, 7.5YR33, 10-20% , Faint; Clay loam; Strong grade of structure, 2-5 mm, Polyhedral; 5-10 mm, Polyhedral; Rough-ped fabric; Moderately moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 5.5 (Raupach); Many, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Wavy change to -
A3	0.13 - 0.21 m	(7.5YR2.5/3-Moist); Biological mixing, 5YR2.52, 20-50% , Faint; Clay loam; Strong grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Rough-ped fabric; Dry; Firm consistence; 2-10%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 6 (Raupach); Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots; Clear, Irregular change to -
B1	0.21 - 0.43 m	Dark reddish brown (5YR3/4-Moist); Biological mixing, 5YR2.52, 10-20% , Faint; Silty clay loam; Strong grade of structure, 5-10 mm, Polyhedral; 2-5 mm, Polyhedral; Smooth-ped fabric; Dry; Firm consistence; 2-10%, fine gravelly, 2-6mm, angular tabular, Coal, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Irregular change to -
B21	0.43 - 0.98 m	Red (2.5YR4/6-Moist); Mottles, 10YR66, 2-10% , Faint; Silty clay; Moderate grade of structure, 10-20 mm, Subangular blocky; 5-10 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, angular tabular, Coal, coarse fragments; 2-10%, coarse gravelly, 20-60mm, subangular, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (Raupach); Few, very fine (0-1mm) roots; Diffuse change to -
B22	0.98 - 1.53 m	Red (2.5YR4/6-Moist); Mottles, 7.5YR68, 2-10% , Distinct; Silty clay; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 0-2%, coarse gravelly, 20-60mm, subangular, coarse fragments; Field pH 5 (Raupach); Diffuse change to -
B23	1.53 - 2.73 m	Dark red (2.5YR3/6-Moist); ; Silty clay; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 5 (Raupach); Diffuse change to -

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B3 2.73 - 3.03 m Red (2.5YR4/6-Moist); ; Clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subangular tabular, coarse fragments; Field pH 4.5 (Raupach);

Morphological Notes

A1 Numerous fungal mats.

A3 Numerous fungal mats.

B21 Several infilled root channels produce variable bulk density. Yellow patches are possibly highly weathered colluvial gravel.

B22 Yellow patches are possibly highly weathered colluvial gravel.

B23 Recurring bands of fine sedimentary gravel.

B3 Colour and texture would indicate this layer still a B2 horizon

Observation Notes

First of 2 growth plots in the older age class along Stan's Trail.

Site Notes

STAN'S TRAIL OLD AGE CLASS PLOT 1

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Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.03										
0.03 - 0.13	4.19C		2.43H	1.38	1.37	0	6.63J 0K		11.81E	
0.13 - 0.21	4.19C		1.36H	1.1	1.01	0.01	6.4J 0K		9.87E	
0.21 - 0.43	4.37C		1.38H	1.98	0.95	0.03	3.44J 0K		7.77E	
0.43 - 0.98	4.38C		0.06H	0.65	0.71	0.01	4.61J 0K		6.03E	
0.98 - 1.53	4.09C		0.05H	0.4	0.72	0	5.84J 0K		7.02E	
1.53 - 2.73	4.02C		0.03H	0.15	0.4	0	4.87J 0K		5.46E	
2.73 - 3.03	3.96C		0.09H	0.08	0.25	0.03	4.23J 0K		4.68E	

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
	%	C	P	P	N	K		Density	GV		CS	FS
m		%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.03												
0.03 - 0.13		8.41B		437.9B	0.31A		0.64	6.29				
0.13 - 0.21		5.44B		383.9B	0.23A		0.95	7.42				
0.21 - 0.43		2.63B		322B	0.13A		1.09	4.5				
0.43 - 0.98		0.78B		268B	0.05A		1.11	0.51				
0.98 - 1.53		0.67B		266.6B	0.04A			3.14				
1.53 - 2.73		0.23B		269.6B	0.03A			2.66				
2.73 - 3.03		0.14B		278.9B	0.02A			2.67				

[illegible]

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Laboratory Analyses Completed for this profile

15_NR	Sum of Ex. cations + Ex. acidity - Not recorded
15E1_AL	Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts
15E1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble
15E1_H	Exchangeable H - by compulsive exchange, no pretreatment for soluble salts
15E1_K	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MG	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
2A1	Air-dry moisture content
4B2	pH of 1:5 soil/0.01M calcium chloride extract - following Method 4A1
6B2	Total organic carbon - high frequency induction furnace, volumetric
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A3	Total Phosphorus (ppm) - semimicro kjeldahl, automated colour
P10_GRAV	Gravel (%)
P10_S_0.48	0.48 micron (cumulative %) - Sedigraph
P10_S_1	1 micron (cumulative %) - Sedigraph
P10_S_1000	1000 micron (cumulative %) - Sedigraph
P10_S_125	125 micron (cumulative %) - Sedigraph
P10_S_15.6	15.6 micron (cumulative %) - Sedigraph
P10_S_2	2 micron (cumulative %) - Sedigraph
P10_S_20	20 micron (cumulative %) - Sedigraph
P10_S_2000	2000 micron (cumulative %) - Sedigraph
P10_S_250	250 micron (cumulative %) - Sedigraph
P10_S_3.9	3.9 micron (cumulative %) - Sedigraph
P10_S_31.2	31.2 micron (cumulative %) - Sedigraph
P10_S_500	500 micron (cumulative %) - Sedigraph
P10_S_53	53 micron (cumulative %) - Sedigraph
P10_S_63	63 micron (cumulative %) - Sedigraph
P10_S_7.8	7.8 micron (cumulative %) - Sedigraph
P3A1	Bulk density - g/cm3