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Erratum

Earth Surfaces Processes and Landforms, Volume 30, Issue 8 'Soil Production in Heath and Forest, Blue Mountains, Australia: Influence of Lithology and Palaeoclimate' by Marshall T Wilkinson, John Chappell, Geoff S. Humphreys, Keith Fifield, Bart Smith and Paul Hesse, pages 923–934.

Incorrect versions of Tables 1 and 2, Figures 6 and 7 were printed along with numerical errors on pages 928, 929, 933. Please find correct versions below.

The authors noticed two errors in their calculations of soil production rates in Wilkinson *et al*. (2005). Firstly, they used two different cosmic ray attenuation lengths rather than one consistent value. Secondly, in calculating LGP soil production rates, ^{10}Be accumulated since 10 ka was not deducted, as thought. These errors are remedied below (Tables 1 and 2, and Figures 6 and 7), using a cosmic ray attenuation length of 150 g cm^{-2} (Dunai, 2000). The corrected calculations do not alter their conclusions.

Table 1. Sample details, ^{10}Be concentrations and soil production estimates

Sample	Description	Depth (cm)	Alt. (km)	P_0 (atoms g^{-1} y^{-1})	S*	^{10}Be (atoms g^{-1} × 10^3)	±σ	E° (m Ma^{-1})	±σ	LGP°° (m Ma^{-1})	±σ
Spur/heath											
Distal spur											
BM-1	Hard sandstone	0	1·07	9·66	1·00	389	21	13·4	0·8	na	na
BM-2	Hard sandstone	0	1·07	9·66	1·00	435	22	12·0	0·6	na	na
BM-3	Hard sandstone	0	1·07	9·66	1·00	334	20	15·7	1·0	na	na
BM-4	Ferruginised sandstone	0	1·07	9·66	1·00	518	25	10·0	0·5	na	na
Near veg boundary											
Pit 5											
JC-14	Ferruginised sandstone	5	1·08	9·73	0·98	268	42	18·1	3·4	29·1	8·9
Pit 6											
JC-15	Saprolitic coarse sandstone	40	1·08	9·73	0·96	191	15	16·3	1·4	33·8	4·2
Pagoda											
BM-5	Top, ferruginised sandstone	–	1·07	9·66	1·00	542	25	9·5	0·5	na	na
JC-12	ENE flank, hard sandstone	–	1·07	9·66	0·85	167	12	26·8	2·1	na	na
JC-13	N flank, hard sandstone	–	1·07	9·66	0·92	206	17	23·5	2·1	na	na
Plateau/forest											
Pit 1											
BM-7	Ferruginised sandstone band	0	1·13	10·08	1·00	549	34	9·8	0·7	na	na
BM-9	Ferruginised sandstone band	0	1·13	10·08	1·00	549	24	9·9	0·5	na	na
BM-8	Ferruginised sandstone	25	1·13	10·08	1·00	381	23	10·5	0·7	17·8	1·5
BM-6	Soft saprolitic sandstone	55	1·13	10·08	1·00	305	22	9·1	0·7	16·0	1·6
Pit 2											
BM-10	Soft, saprolitic sandstone	50	1·13	10·08	1·00	246	21	12·1	1·2	22·6	2·8
Pit 3											
JC-18	Soil	55	1·13	10·08	1·00	290	17	9·6	0·6	17·0	1·3
JC-17	Top of saprolite	60	1·13	10·08	1·00	308	19	8·5	0·6	14·7	1·2
JC-16	Saprolitic sandstone	87	1·13	10·08	1·00	200	18	9·5	1·0	16·7	2·1
Pit 4											
JC-19	Ferruginised sandstone saprolite	30	1·13	10·08	1·00	336	27	11·3	1·0	20·6	2·3
Mt York											
BM-11	Hard coarse sandstone	0	1·04	9·46	1·00	403	25	12·6	0·9	na	na

* S, Shield factor (Dunne *et al.* 1999)
° Soil production rates using $P_{0,}$ S and present soil depth (density: 1·8 g cm^{-3}) (following Heimsath *et al*., 1999; 2000).
°° Soil production rates soil depths 30 cm less than present before 10 ka and present depth since 10 ka.
Na = not applicable

Table II. Average erosion rates for landscape units under steady-state conditions (apparent rate) and thinner soil cover during the last glacial period (LGP)

Landscape unit	Apparent rate (m Ma^{-1})	LGP rate (m Ma^{-1})
Spur/heath – outcrops	13	13
Spur/heath – soil mantled	17	31
Plateau/forest	10	16

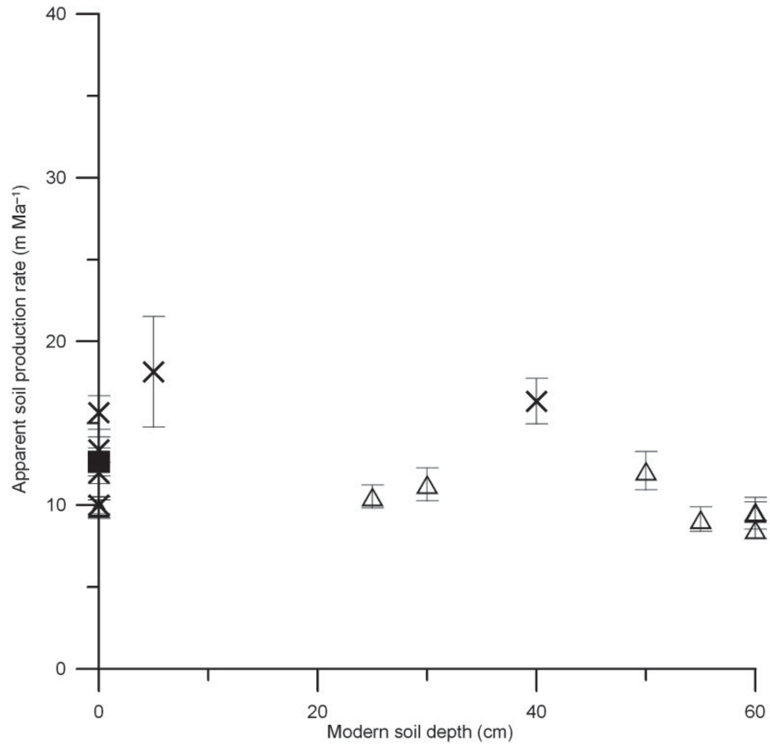

Figure 6. Apparent rates of soil production calculation from versus present-day soil depth. Crosses = heath, triangles = forest; solid square = Mt York

The following numerical errors in the text of the article will also be corrected.

Page 928–929, lines 55–48 the text is corrected to read 'Erosion rates on exposed rock surfaces, except for pagoda flanks, range from 9·8 to 15·7 m Ma^{-1} with a mean of 11·8 m Ma^{-1}, very similar to the result from the exposed crest of Mt York (12·6 m Ma^{-1}). Pagoda flanks are eroding more rapidly (25 m Ma^{-1}). Results for ferruginized sandstone bands are lower than non-ferruginized sandstone (9·9 versus 13·7 m Ma^{-1}) but the rate for the ferruginized bands is likely to be even lower, because these results are based on ^{10}Be accumulated during erosion of more than a metre of rock, most of which is non-ferruginized sandstone . . . Apparent rates for soil-mantled forest and soil-mantled heath average *c*. 10 and 17 m Ma^{-1} respectively (Table II), and show little variation with depth. Furthermore, subsoil samples in the heath with contrasting rock hardness gave similar apparent erosion rates (saprolite sample JC15 and hard rock sample JC14:Table I). This contrasts with determinations reported by Heimsath *et al*. (2000) from granite soils at Bega Valley, where exposed granite gave low erosion rates whereas saprolite gave substantially higher rates. The mean erosion rate for rock outcrops in heath (13 m Ma^{-1}) is less than the apparent rate under a soil mantle (17 m Ma^{-1}) (Table II), which is consistent with similar studies (e.g. Heimsath *et al*., 1999; Small *et al*., 1999; Granger *et al*., 2001).

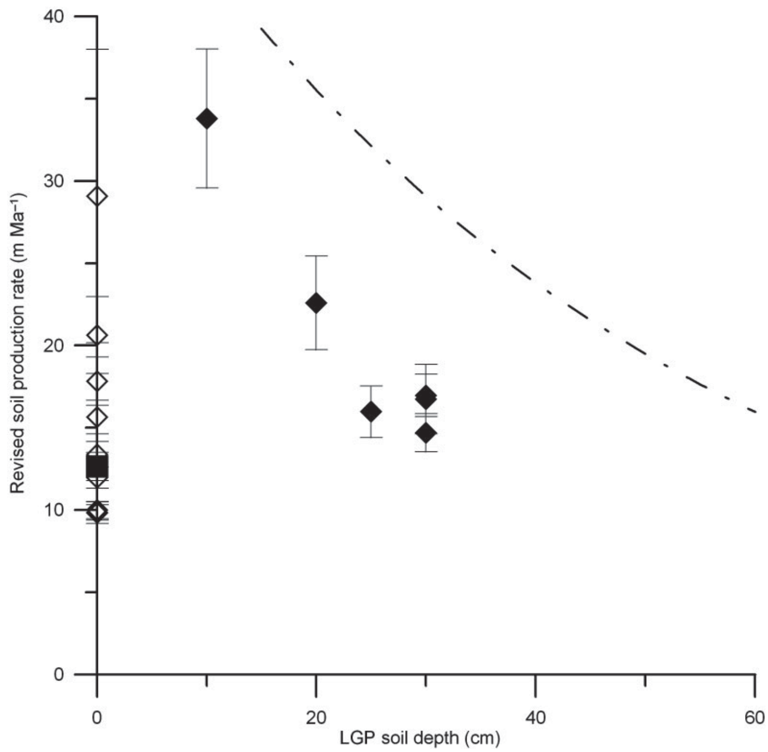

Figure 7. Alternative soil production rates based on ^{10}Be accumulation under soils 30 cm thinner than at present, during the last Glacial Period. Dashed line represents soil production at the Bega Valley study site of Heimsath *et al*. (2001). Closed and open diamonds are saprolite and hard rock samples respectively.

Discussion

The average erosion rate at Marangaroo estimated from ^{10}Be in exposed rock surfaces in Marangaroo (13·1 m Ma^{-1}) accords with the post Miocene denudation rate of < 14 m Ma^{-1} estimated for the Blue Mountains plateau by van der Beek *et al*. (2001).

Page 933 lines 11–14 the text is corrected to read 'Either way, rates from the forested plateau (10-16 m Ma^{-1}) and heath mantled spurs (13–31 m Ma^{-1}) are reasonably consistent with post-Miocene denudation rates deduced by van der Beek *et al*. (2001).

Assumptions concerning the history of soil thickness affect the apparent relationship between soil production and soil depth. The maximum estimate from Marangaroo (Table 1, Pit 6; 34 m Ma^{-1}) assumes the soil was 30 cm thinner until 10 000 years ago, which in turn rests on our interpretation of an OSL age-depth profile in one of our soil pits.'

The authors wish to add the following text to the acknowledgements:
We thank David Fink of the Australian Nuclear and Science Technology Organisation (ANSTO) for noticing the use of two cosmic ray attenuation lengths in our erroneous calculations.

The authors wish to add the following text to the references:

Dunai, T. J., 2000. Scaling factors for production rates of in situ produced cosmogenic nuclides: a critical reevaluation. *Earth and Planetary Science Letters*, **176**(1): 157–169.

Wilkinson, M. T., Chappell, J., Humphreys, G. S., Fifield, K., Smith, B. and Hesse, P. P., 2005. Soil production in heath and forest, Blue Mountains, Australia: influence of lithology and palaeoclimate. *Earth Surface Processes and Landforms*: in press.

