

Supplementary material for

Humerus midshaft histology in a modern and fossil wombat

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Table S1. U-series isotopic data for the overlying speleothem at A'Beckett's Cave at Bakers Swamp, New South Wales. Ratios are activity ratios calculated from the atomic ratios, but normalised to measured values of secular-equilibrium HU-1 (Pike *et al.* 2003). All errors are given at the 2σ level. For all other analytical procedures see Zhao *et al.* (2009).

Sample Name	U (ppm)	²³² Th (ppb)	²³⁰ Th/ ²³² Th	²³⁰ Th/ ²³⁸ U	²³⁴ U/ ²³⁸ U	uncorr. ²³⁰ Th age (ka)	corr. ²³⁰ Th age (ka)	corr. initial ²³⁴ U/ ²³⁸ U
AH-35-2	0.3246 ± 0.0002	3.95 ± 0.01	227.0 ± 0.5	0.929 ± 0.002	1.542 ± 0.001	93.9 ± 0.3	93.7 ± 0.3	1.709 ± 0.002
AH-CCB5-1 BO_H4_44	0.4289 ± 0.0003	3.38 ± 0.01	204.2 ± 0.8	0.540 ± 0.001	1.576 ± 0.001	44.6 ± 0.1	44.5 ± 0.2	1.655 ± 0.002

References

Pike A.W.G., Hedges R.E.M., and Van Calsteren P. (2002). U-series dating of bone using the diffusion-adsorption model. *Geochimica et Cosmochimica Acta* 66(24), 4273-4286.

Zhao, J.X., Yu, K.F. and Feng, Y.X. (2009). High-precision ^{238}U – ^{234}U – ^{230}Th disequilibrium dating of the recent past: a review. *Quaternary Geochronology*, 4(5), 423-433.

Figs S1–3. Higher resolution images of each of the three scans shown in Fig. 2 in the main text (see following pages).





