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ENSO–cave drip water hydrochemical relationship: a 7-year dataset from south-eastern Australia

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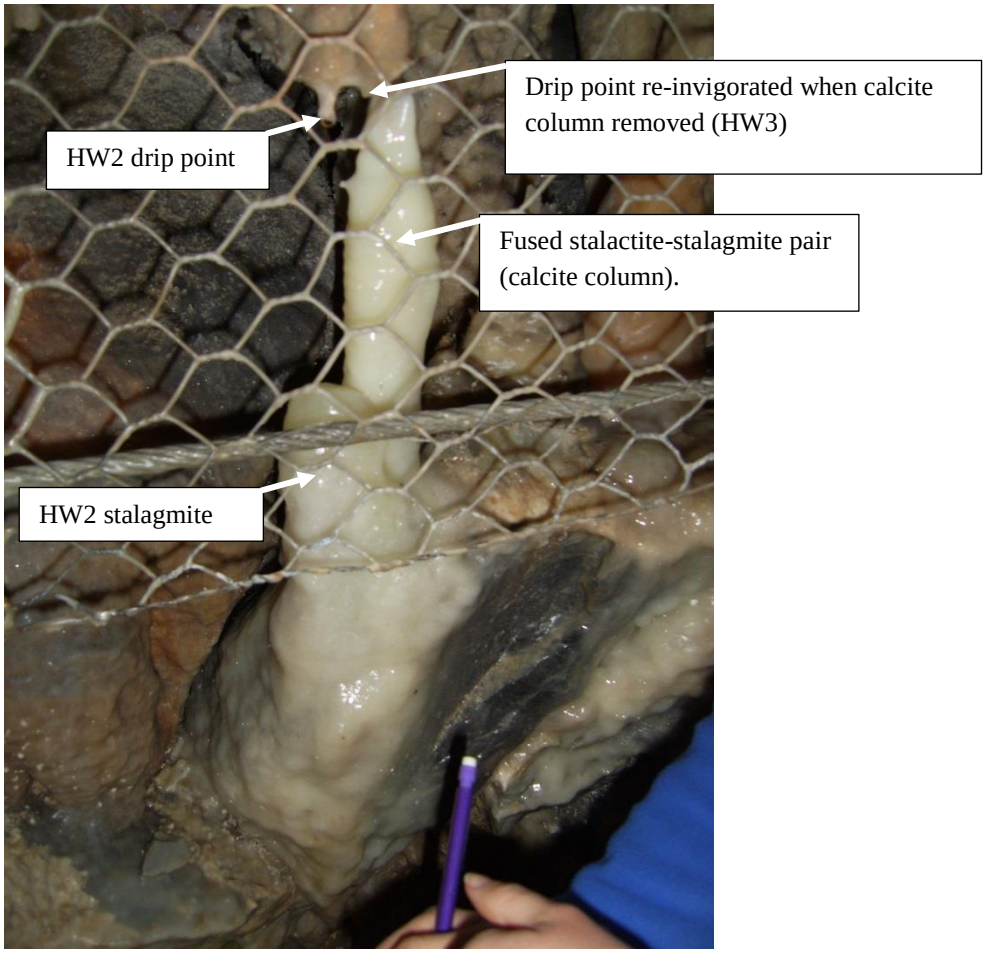
Supplementary information

S1. Photograph of drip site HW2 prior to the removal of stalagmite HW2. Drip rate field measurements of HW2 prior to the removal of the calcite column was 30 seconds/drip (11/06/2006). After removal the drip rate for HW2 slowed to 287.5 seconds/drip (11/11/2006; n=4, range 281-296 seconds) and 25.25 seconds/drip was recorded at the newly formed drip site HW3 (11/11/2006; n=4, range 25-26 seconds). Based on this field evidence, we interpret drip site HW2 is an overflow of site HW3.



S2. Description of instrumentation employed and data recorded including resolution, range and accuracy where available.

Parameter	Resolution	Range	Accuracy ±
Davis Vantage Pro2™ Weather Station			
BARROMETRIC PRESSURE			
Barometric Pressure (Elevation range: -600 to +4570 m)	0.1 mb	540 to 1100 mb or hPa	1,0 mb or hPa
HUMIDITY			
Inside humidity	1%	1% to 100%	3%
Outside humidity	1%	1% to 100%	3%
RAINFALL			
Rainfall	0.2 mm	0 to 6553 mm	4%
Rate of rainfall	0.1 mm/hr	0 to 2438 mm/hr	5% ≤ 127 mm/hr
TEMPERATURE			
Inside temperature	0.1°C	0° to +60°C	0.5°C
Outside temperature	0.1°C	-40° to +65°C	0.5°C
WIND			
Wind direction	1°	0° to 360°	3°
Wind speed	1 km/hr	1 to 320 km/hr	5%
Stevens Hydra Probe® Soil Sensor			
Temperature	-	-10° to +55°C	0.6°C
Soil moisture wfv	-	From completely dry to fully saturated	0.01 (for most soils) 0.03 $m^3 m^{-3}$ (max for fine textured soils)
Electrical Conductivity	-	0.01 to 1.5 S/m	± 2.0% or 0.005 S/m whichever is typically greater
Dielectric constant	-	1 to 80	± 1.5% or 0.2 whichever is typically greater
Vaisala GMP343 Carbon dioxide probe			
Soil CO_2	-	0 – 2 %	10 ppm CO_2

S3. Dripwater ln(Sr/Ca) vs. ln(Mg/Ca) ratios at site HW1 and HW3 are graphed together with the bedrock ratios.