

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	delta ¹³ C _(calcite) (‰, VPDB)	delta ¹⁸ O _(calcite) (‰, VPDB)
10.5	-0.31	4.39
13.5	-3.95	3.92
16.5	-4.34	-2.62
19.5	-1.56	-1.10
22.5	-2.04	-0.46
25.5	-1.45	0.68
28.5	-3.16	-1.05
31.5	-2.93	0.54
34.5	-2.71	-2.18
37.5	-6.48	1.48
40.5	-9.09	3.83
43.5	-4.61	3.37
46.5	-2.18	-1.71
49.5	-1.97	-2.29
52.5	-2.20	-1.78
55.5	-1.89	-1.51
58.5	-0.15	0.36
61.5	-3.21	-1.70
64.5	-4.95	-1.91
67.5	-1.25	-1.19
70.5	-1.41	-0.08
73.5	-2.83	0.41
76.5	-1.45	0.42
79.5	-5.84	-0.43
85.5	-1.87	0.13
88.5	-2.07	-0.56
91.5	-4.45	-1.38
94.5	-6.01	-2.46
97.5	-2.30	0.55
100.5	-3.00	-1.78
103.5	-2.83	-0.73
106.5	-3.39	-1.97
109.5	-0.75	-0.01
112.5	-1.24	-0.35
115.5	-2.26	-4.86
118.5	-2.44	1.30
122.5	-3.27	-2.07
124.5	-2.51	-0.98
127.5	-0.62	1.78
130.5	-1.21	2.25
133.5	-1.38	2.14
136.5	-1.17	2.57

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	delta¹³C_(calcite) (‰, VPDB)	delta¹⁸O_(calcite) (‰, VPDB)
139.5	-1.36	2.65
152.5	-2.80	-1.99
154.5	-3.27	-1.13
156.5	-2.72	-0.46
157.5	-2.76	0.52
160.5	-3.04	-1.91
161.5	-1.86	-2.54
163.5	-3.68	-0.85
166.5	-1.85	0.18
167.5	-2.05	0.17
169.5	-3.61	-1.13
172.5	-2.27	1.57
173.5	-2.44	1.10
175.5	-2.16	-0.31
176.5	-2.85	0.63
178.5	-1.19	1.00
181.5	-0.72	2.66
182.5	-0.87	2.48
184.5	-0.95	2.61
187.5	-2.61	-1.10
188.5	-1.87	2.24
190.5	-1.71	1.41
193.5	-1.33	2.01
194.5	-1.23	1.81
196.5	-1.41	1.78
197.5	-1.71	0.98
199.5	-1.76	0.76
202.5	-1.53	2.36
203.5	-1.84	1.21
205.5	-4.28	-1.99
208.5	-1.59	-0.39
209.5	-1.80	0.11
211.5	-2.67	-1.14
235.5	-2.40	-0.67
238.5	-1.97	-1.08
239.5	-1.56	1.80
241.5	-1.97	0.83
244.5	-2.64	-1.00
245.5	-4.36	0.51
247.5	-1.64	1.81
250.5	-1.33	1.99
251.5	-1.88	2.01

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	$\delta^{13}\text{C}_{(\text{calcite})}$ (‰, VPDB)	$\delta^{18}\text{O}_{(\text{calcite})}$ (‰, VPDB)
253.5	-3.03	-1.09
256.5	-0.93	2.40
257.5	-1.65	1.29
259.5	-2.17	-0.36
262.5	-1.99	0.20
263.5	-2.26	1.51
265.5	-2.32	-0.45
268.5	-1.26	0.55
269.5	-1.85	-0.70
271.5	-0.44	2.48
274.5	-0.27	2.99
275.5	-0.62	2.09
277.5	-1.73	1.93
280.5	-2.46	1.32
281.5	-2.13	1.83
283.5	-3.03	0.58
299.5	-1.84	2.40
301.5	-1.37	0.82
304.5	-2.44	1.74
305.5	-2.21	-1.74
307.5	-1.80	1.81
310.5	-2.15	1.76
311.5	-1.52	0.67
313.5	-2.02	1.02
316.5	-2.03	0.91
317.5	-2.04	0.18
319.5	-2.97	-1.77
322.5	-2.21	-0.07
323.5	-1.97	2.06
325.5	-4.10	-0.42
329.5	-1.84	1.88
330.5	-2.27	-1.40
331.5	-2.01	1.58
334.5	-5.17	0.74
335.5	-3.36	-3.16
337.5	-3.47	0.53
340.5	-2.22	2.41
341.5	-2.87	-1.73
343.5	-5.08	0.69
344.5	-1.70	2.42
346.5	-4.40	0.16
347.5	-2.35	1.17

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	delta¹³C_(calcite) (‰, VPDB)	delta¹⁸O_(calcite) (‰, VPDB)
349.5	-2.74	1.43
353.5	-2.68	-0.80
382.5	-3.00	-0.50
384.5	-2.87	-2.19
387.5	-2.29	-1.70
388.5	-5.93	-1.40
390.5	-2.29	-0.78
393.5	-4.93	-5.73
394.5	-2.74	0.81
396.5	-2.38	0.88
399.5	-1.44	1.35
400.5	-2.69	-1.94
402.5	-2.18	1.72
405.5	-2.25	0.72
406.5	-2.28	-1.92
408.5	-2.64	-2.40
411.5	-2.21	1.04
412.5	-4.90	-4.94
414.5	-1.76	2.40
417.5	-2.56	1.34
418.5	-1.25	1.66
420.5	-2.54	0.43
423.5	-2.56	-1.21
424.5	-2.15	-0.46
426.5	-2.96	-1.42
429.5	-3.11	-2.15
430.5	-1.92	1.70
432.5	-2.58	-1.02
435.5	-2.45	-1.03
436.5	-3.09	-1.55
438.5	-2.16	-0.63
439.5	-2.41	-1.23
440.5	-1.73	1.39
444.5	-1.76	1.47
445.5	-2.31	-2.13
447.5	-3.26	0.81
450.5	-5.19	-3.67
451.5	-2.09	-1.23
453.5	-1.95	2.14
456.5	-3.44	0.68
457.5	-2.24	1.48
459.5	-1.16	1.07

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	delta ¹³ C _(calcite) (‰, VPDB)	delta ¹⁸ O _(calcite) (‰, VPDB)
462.5	-2.28	-1.69
463.5	-1.57	0.98
465.5	-1.47	-0.41
468.5	-1.84	0.06
469.5	-1.93	-0.07
471.5	-1.95	2.14
474.5	-3.44	0.68
475.5	-2.83	-2.84
477.5	-1.16	1.07
480.5	-2.30	-1.97
481.5	-1.60	-0.47
482.5	-1.58	-0.37
483.5	-1.47	-0.41
486.5	-2.05	-0.89
487.5	-2.65	-0.61
489.5	-2.15	-1.59
491.5	-1.95	-1.02
492.5	-1.55	0.55
495.5	-1.47	0.94
498.5	-4.41	-3.35
499.5	-4.33	-2.84
501.5	-1.28	1.30
504.5	-2.10	-2.43
505.5	-1.66	-0.34
517.5	-2.58	-4.04
518.5	-2.49	-2.59
519.5	-2.12	-1.83
522.5	-3.09	-2.21
523.5	-2.80	-0.51
525.5	-2.59	-0.11
528.5	-5.21	-2.03
529.5	-4.01	-0.71
531.5	-3.15	-1.48
534.5	-1.61	0.66
535.5	-1.25	0.59
537.5	-2.33	-1.83
540.5	-1.90	0.82
541.5	-3.07	-1.45
543.5	-2.91	-2.23
546.5	-2.98	-1.71
547.5	-2.29	-0.87
549.5	-2.44	-0.74

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	delta¹³C_(calcite) (‰, VPDB)	delta¹⁸O_(calcite) (‰, VPDB)
552.5	-2.78	-1.76
553.5	-2.01	-1.01
555.5	-1.31	-0.23
558.5	-2.80	-1.56
559.5	-3.04	-1.26
561.5	-2.13	0.92
564.5	-1.56	1.19
565.5	-2.86	-1.48
567.5	-1.44	0.96
570.5	-2.53	-0.97
571.5	-3.13	-2.36
573.5	-1.59	-1.22
576.5	-2.25	-0.06
594.5	-2.65	2.15
595.5	-2.81	1.64
596.5	-3.56	2.70
597.5	-3.87	3.45
598.5	-5.77	-0.72
599.5	-5.12	-0.03
600.5	-4.47	0.66
601.5	-3.82	1.35
602.5	-3.17	2.04
603.5	-2.52	2.73
604.5	-1.87	3.42
605.5	-1.58	3.97
606.5	-2.46	1.29
607.5	-3.04	1.83
608.5	-2.33	3.22
609.5	-2.15	2.25
610.5	-2.70	3.03
611.5	-2.63	3.12
612.5	-2.76	1.89
613.5	-2.46	3.00
614.5	-2.65	2.42
615.5	-2.53	1.59
616.5	-2.82	1.37
617.5	-3.07	0.55
618.5	-2.92	-1.09
619.5	-3.65	-2.99
620.5	-3.51	-2.43
621.5	-3.38	-2.80
622.5	-5.11	-3.10

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	delta ¹³ C _(calcite) (‰, VPDB)	delta ¹⁸ O _(calcite) (‰, VPDB)
623.5	-5.75	-5.03
624.5	-4.23	-0.88
625.5	-2.19	1.06
626.5	-3.22	-1.50
627.5	-3.77	-3.36
628.5	-4.24	-4.00
629.5	-4.76	-5.58
630.5	-4.28	-5.58
631.5	-5.29	-6.35
632.5	-5.40	-6.54
633.5	-5.53	-6.13
634.5	-5.39	-6.22
635.5	-5.48	-6.93
636.5	-6.75	-5.52
637.5	-5.22	-6.74
638.5	-4.98	-7.85
639.5	-4.69	-3.87
640.5	-2.92	-1.74
641.5	-2.16	-2.56
642.5	-3.82	0.06
643.5	-3.87	2.49
644.5	-2.29	0.53
645.5	-2.19	-0.14
646.5	-1.57	0.99
647.5	-2.21	-0.94
662.5	-3.57	2.20
663.5	-2.97	3.02
664.5	-3.45	-0.99
665.5	-3.84	3.89
666.5	-2.95	3.63
667.5	-2.55	3.05
668.5	-2.69	1.84
669.5	-2.19	2.02
670.5	-4.54	-0.23
671.5	-2.44	0.53
672.5	-2.92	1.83
673.5	-1.76	1.02
674.5	-1.90	0.10
675.5	-1.92	1.32
676.5	-1.32	3.32
677.5	-2.19	-0.61
678.5	-2.45	-0.86

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	delta¹³C_(calcite) (‰, VPDB)	delta¹⁸O_(calcite) (‰, VPDB)
679.5	-2.22	-0.54
680.5	-2.81	-3.81
681.5	-4.98	-7.01
682.5	-5.54	-6.60
683.5	-4.92	-5.74
684.5	-3.46	-2.80
685.5	-2.49	0.02
686.5	-3.08	-1.89
687.5	-2.40	-0.70
688.5	-2.95	-0.25
689.5	-2.07	-0.18
690.5	-1.76	-0.46
691.5	-2.01	-0.68
692.5	-2.17	-0.87
693.5	-2.30	-0.56
694.5	-2.34	-1.03
695.5	-1.94	-0.63
696.5	-2.67	-1.28
697.5	-2.65	-1.04
698.5	-2.99	-0.76
699.5	-2.89	-1.35
700.5	-3.08	-2.03
701.5	-2.72	-1.78
702.5	-2.97	-1.79
703.5	-2.69	-0.37
704.5	-2.20	-0.42
705.5	-2.42	0.35
706.5	-2.62	-0.10
707.5	-2.32	-0.70
708.5	-2.61	-0.33
709.5	-2.28	0.35
710.5	-2.03	-0.44
711.5	-2.20	0.63
712.5	-2.24	0.56
713.5	-2.49	-0.45
714.5	-2.48	-0.90
715.5	-2.40	-1.77
716.5	-1.55	-0.73
717.5	-1.89	0.02
718.5	-1.51	-1.03
733.5	-2.61	1.15
736.5	-2.99	3.73

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	delta ¹³C_(calcite) (‰, VPDB)	delta ¹⁸O_(calcite) (‰, VPDB)
737.5	-3.01	4.51
739.5	-2.90	1.88
741.5	-3.20	-1.54
742.5	-2.91	-1.57
745.5	-2.30	-0.67
746.5	-3.43	-4.79
748.5	-3.38	-0.24
751.5	-2.53	2.13
753.5	-1.83	1.10
754.5	-2.06	0.75
757.5	-3.65	1.15
758.5	-4.06	1.93
760.5	-5.87	3.65
763.5	-3.60	3.02
766.5	-1.83	0.97
769.5	-2.24	1.90
770.5	-1.61	0.92
772.5	-1.92	-0.01
775.5	-1.90	0.15
776.5	-2.37	2.58
778.5	-5.64	4.44
781.5	-6.63	4.65
782.5	-4.51	2.88
784.5	-1.85	0.70
787.5	-2.39	-1.35
788.5	-1.74	0.68
790.5	-2.78	0.97
793.5	-2.28	0.72
794.5	-2.68	1.22
796.5	-2.39	-1.00
797.5	-1.99	2.26
799.5	-5.15	4.13
802.5	-5.86	3.07
803.5	-5.18	3.86
805.5	-4.78	2.80
808.5	-3.33	2.48
809.5	-3.85	2.95
811.5	-2.85	2.11
814.5	-3.76	2.20
815.5	-4.18	2.93
817.5	-2.97	1.44
820.5	-2.25	-0.33

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	delta ¹³ C _(calcite) (‰, VPDB)	delta ¹⁸ O _(calcite) (‰, VPDB)
821.5	-3.63	1.48
823.5	-4.29	2.34
826.5	-2.21	0.42
827.5	-2.99	1.24
829.5	-5.19	4.08
832.5	-5.50	5.14
833.5	-4.65	4.94
835.5	-2.29	2.43
838.5	-1.18	2.96
839.5	-0.78	2.78
841.5	-3.90	-1.01
844.5	-1.40	0.25
845.5	-1.49	1.75
847.5	-2.14	1.05
850.5	-2.92	1.27
851.5	-2.38	1.07
853.5	-2.48	-0.66
856.5	-4.93	-2.66
858.5	-2.08	0.03
859.5	-2.13	-0.77
888.5	-1.77	1.70
891.5	-1.64	0.61
892.5	-1.52	0.94
894.5	-1.69	1.01
897.5	-1.89	0.35
898.5	-2.01	0.30
900.5	-1.87	0.86
903.5	-1.63	2.91
904.5	-2.01	1.16
906.5	-2.89	1.68
909.5	-1.68	2.34
910.5	-2.04	3.04
912.5	-1.48	2.83
915.5	-2.37	2.28
916.5	-2.06	2.06
918.5	-2.06	1.39
921.5	-2.04	0.76
922.5	-2.45	0.18
924.5	-2.87	0.60
927.5	-3.01	0.36
928.5	-3.77	-1.00
930.5	-2.81	-0.03

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	$\delta^{13}\text{C}_{(\text{calcite})}$ (‰, VPDB)	$\delta^{18}\text{O}_{(\text{calcite})}$ (‰, VPDB)
959.5	-1.65	2.78
962.5	-2.67	1.31
963.5	-2.64	1.15
965.5	-2.23	1.40
966.5	-2.06	1.49
968.5	-2.67	1.64
969.5	-3.28	0.02
971.5	-4.11	0.04
974.5	-3.99	-2.96
975.5	-3.36	-2.65
977.5	-2.67	-0.82
980.5	-3.31	-1.88
981.5	-2.49	-1.06
983.5	-3.67	1.32
986.5	-2.88	1.96
987.5	-3.14	1.71
989.5	-3.54	0.98
992.5	-2.88	2.44
993.5	-2.55	2.08
995.5	-2.44	2.20
996.5	-2.59	1.64
998.5	-2.78	2.47
999.5	-2.96	3.46
1001.5	-2.98	1.61
1002.5	-3.14	0.96
1006.5	-2.40	-0.06
1007.5	-2.94	0.68
1009.5	-2.63	1.21
1010.5	-2.17	2.15
1012.5	-2.43	1.42
1013.5	-2.28	1.65
1015.5	-2.16	1.00
1016.5	-2.67	0.90
1017.5	-3.18	-0.64
1018.5	-3.29	-0.19
1021.5	-1.99	1.51
1022.5	-1.93	1.62
1024.5	-1.82	1.45
1025.5	-2.07	2.07
1027.5	-2.10	1.89
1028.5	-2.81	1.53
1030.5	-1.74	1.09

Table S4. Raw stable oxygen and carbon isotope data versus depth

Depth (cm)	delta¹³C_(calcite) (‰, VPDB)	delta¹⁸O_(calcite) (‰, VPDB)
1031.5	-2.71	2.26
1033.5	-3.46	2.14
1034.5	-3.73	2.44
1036.5	-2.91	0.08
1037.5	-2.67	-0.24
1039.5	-3.08	-0.09
1040.5	-3.10	0.11
1042.5	-3.26	-0.66
1043.5	-2.15	1.50
1045.5	-3.30	-0.78
1046.5	-1.89	0.38
1048.5	-4.26	1.20
1049.5	-3.55	1.17
1051.5	-3.48	0.63
1052.5	-3.38	0.75
1054.5	-3.63	0.61
1055.5	-3.62	0.83
1057.5	-2.85	0.01
1058.5	-3.16	-0.65
1060.5	-3.57	-1.25
1061.5	-4.59	-1.24
1063.5	-3.67	-0.36
1064.5	-3.57	-0.25
1066.5	-3.14	0.30
1067.5	-2.07	-0.79
1069.5	-3.55	-2.57
1070.5	-3.64	-2.13
1072.5	-3.68	-1.79
1073.5	-4.01	-1.81