

## APPENDIX A: LGM LAND SNAIL SHELL DATA

COUNTRY	SITE	GENUS	SAMPLING	LAT. (N)	LON. (E)	ALTITUDE (m)	$\delta^{18}\text{O}$	AGE (ky)	AGE- ERROR (ky)	DEPTH (m)
Belgium	Harmignies	Succinea	crushed 5	50.4167	4.0000	51	0.12	22.5	1.5	8.3
Belgium	Harmignies	Succinea	crushed 1	50.4167	4.0000	51	0.25	22.5	1.5	8.3
Belgium	Harmignies	Succinea	crushed 1	50.4167	4.0000	51	0.39	22.5	1.5	8.3
Belgium	Harmignies	Succinea	crushed 1	50.4167	4.0000	51	-0.51	22.5	1.5	8.3
Czech Republic	Kutná Hora	Pupilla	crushed 5	49.9683	15.2917	220	-4.30	21.9	2.2	0.7
Czech Republic	Kutná Hora	Pupilla	crushed 1	49.9683	15.2917	220	-4.45	21.9	2.2	0.7
Czech Republic	Kutná Hora	Pupilla	crushed 1	49.9683	15.2917	220	-5.44	21.9	2.2	0.7
Czech Republic	Kutná Hora	Pupilla	crushed 1	49.9683	15.2917	220	-4.77	21.9	2.2	0.7
Czech Republic	Kutná Hora	Succinea	crushed 5	49.9683	15.2917	220	-3.84	21.9	2.2	0.7
Czech Republic	Kutná Hora	Succinea	crushed 1	49.9683	15.2917	220	-3.69	21.9	2.2	0.7
Czech Republic	Kutná Hora	Succinea	crushed 1	49.9683	15.2917	220	-4.30	21.9	2.2	0.7
Czech Republic	Kutná Hora	Succinea	crushed 1	49.9683	15.2917	220	-2.96	21.9	2.2	0.7
Germany	Böckingen	Succinea	crushed 5	49.1217	9.1834	160	-2.20	18.1	1.9	1.0
Germany	Böckingen	Succinea	crushed 5	49.1217	9.1834	160	-2.56	18.1	1.9	1.0
Germany	Böckingen	Succinea	crushed 5	49.1217	9.1834	160	-2.43	18.1	1.9	1.0
Germany	Böckingen	Succinea	crushed 5	49.1217	9.1834	160	-2.07	20.2	2.8	2.2
Germany	Böckingen	Succinea	crushed 5	49.1217	9.1834	160	-2.41	20.2	2.8	2.2
Germany	Böckingen	Succinea	crushed 5	49.1217	9.1834	160	-2.45	20.2	2.8	2.2
Germany	Böckingen	Succinea	crushed 5	49.1217	9.1834	160	-2.57	20.2	2.8	2.2
Germany	Böckingen	Succinea	crushed 5	49.1217	9.1834	160	-1.95	20.2	2.8	2.2
Germany	Koblenz- Metternich	Pupilla	crushed 5	50.3567	7.5533	159	-2.00	18.0	1.0	4.8
Germany	Koblenz- Metternich	Pupilla	crushed 1	50.3567	7.5533	159	-1.45	18.0	1.0	4.8
Germany	Koblenz- Metternich	Pupilla	crushed 1	50.3567	7.5533	159	-2.26	18.0	1.0	4.8
Germany	Nussloch	Trichia	crushed 5	49.1900	8.4200	213	-2.37	19.2	1.7	3.5
Germany	Nussloch	Trichia	crushed 5	49.1900	8.4200	213	-2.10	19.2	1.7	3.5
Germany	Nussloch	Trichia	crushed 5	49.1900	8.4200	213	-2.12	19.2	1.7	3.5
Germany	Nussloch	Trichia	crushed 5	49.1900	8.4200	213	-1.74	19.2	1.7	3.5
Germany	Nussloch	Trichia	crushed 5	49.1900	8.4200	213	-1.69	19.2	1.7	3.5
Germany	Nussloch	Succinea	crushed 5	49.1900	8.4200	213	-2.04	19.6	2.4	7.7
Germany	Nussloch	Succinea	crushed 5	49.1900	8.4200	213	-2.79	19.6	2.4	7.7
Germany	Nussloch	Succinea	crushed 5	49.1900	8.4200	213	-2.01	19.6	2.4	7.7
Germany	Nussloch	Trichia	crushed 5	49.1900	8.4200	213	-2.28	19.6	2.4	7.7
Germany	Nussloch	Trichia	crushed 5	49.1900	8.4200	213	-1.72	19.6	2.4	7.7
Germany	Nussloch	Trichia	crushed 5	49.1900	8.4200	213	-1.96	19.6	2.4	7.7
Germany	Regensburg	Succinea	crushed 5	49.0334	12.1167	332	-3.57	NA	NA	NA
Germany	Regensburg	Succinea	crushed 5	49.0334	12.1167	332	-2.84	NA	NA	NA
Germany	Regensburg	Succinea	crushed 5	49.0334	12.1167	332	-2.94	NA	NA	NA
Hungary	Albertirsa	Pupilla	crushed 5	47.2500	19.6167	108	-3.06	19.2	2.2	1.5

Hungary	Albertirsa	Pupilla	crushed 1	47.2500	19.6167	108	-2.66	19.2	2.2	1.5
Hungary	Albertirsa	Pupilla	crushed 1	47.2500	19.6167	108	-3.60	19.2	2.2	1.5
Hungary	Albertirsa	Pupilla	crushed 1	47.2500	19.6167	108	-1.60	19.2	2.2	1.5
Hungary	Albertirsa	Succinea	crushed 3	47.2500	19.6167	108	-2.78	19.2	2.2	1.5
Hungary	Albertirsa	Succinea	crushed 1	47.2500	19.6167	108	-2.33	19.2	2.2	1.5
Hungary	Albertirsa	Succinea	crushed 1	47.2500	19.6167	108	-3.55	19.2	2.2	1.5
Hungary	Albertirsa	Succinea	crushed 1	47.2500	19.6167	108	-3.48	19.2	2.2	1.5
Hungary	Bátaszék	Trichia	crushed 5	46.1833	18.7334	130	-2.37	NA	NA	1.6
Hungary	Bátaszék	Trichia	crushed 1	46.1833	18.7334	130	-2.08	NA	NA	1.6
Hungary	Bátaszék	Trichia	crushed 1	46.1833	18.7334	130	-1.55	NA	NA	1.6
Hungary	Bátaszék	Trichia	crushed 1	46.1833	18.7334	130	-2.51	NA	NA	1.6
Hungary	Paks	Trichia	crushed 5	46.4667	18.8334	130	-4.12	NA	NA	3.0
Hungary	Paks	Trichia	crushed 1	46.4667	18.8334	130	-3.67	NA	NA	3.0
Hungary	Paks	Trichia	crushed 1	46.4667	18.8334	130	-4.60	NA	NA	3.0
Hungary	Paks	Trichia	crushed 1	46.4667	18.8334	130	-3.62	NA	NA	3.0
Hungary	Ságvár	Succinea	crushed 3	46.8334	18.1167	150	-4.48	NA	NA	3.4
Hungary	Ságvár	Succinea	crushed 1	46.8334	18.1167	150	-3.11	NA	NA	3.4
Hungary	Ságvár	Succinea	crushed 1	46.8334	18.1167	150	-4.10	NA	NA	3.4
Hungary	Ságvár	Succinea	crushed 1	46.8334	18.1167	150	-4.19	NA	NA	3.4
Hungary	Sülysáp	Trichia	crushed 3	47.4500	19.5334	185	-1.66	NA	NA	3.2
Hungary	Sülysáp	Trichia	crushed 1	47.4500	19.5334	185	-3.64	NA	NA	3.2
Hungary	Sülysáp	Trichia	crushed 1	47.4500	19.5334	185	-3.09	NA	NA	3.2
Hungary	Sülysáp	Trichia	crushed 3	47.4500	19.5334	185	-2.43	NA	NA	4.0
Hungary	Sülysáp	Trichia	crushed 1	47.4500	19.5334	185	-2.57	NA	NA	4.0
Hungary	Sülysáp	Trichia	crushed 1	47.4500	19.5334	185	-2.49	NA	NA	4.0
Hungary	Sülysáp	Trichia	crushed 1	47.4500	19.5334	185	-1.87	NA	NA	4.0
Hungary	Süttő	Pupilla	crushed 5	47.7500	18.4500	210	-3.11	NA	NA	3.9
Hungary	Süttő	Pupilla	crushed 1	47.7500	18.4500	210	-2.57	NA	NA	3.9
Hungary	Süttő	Pupilla	crushed 1	47.7500	18.4500	210	-4.56	NA	NA	3.9
Hungary	Süttő	Pupilla	crushed 1	47.7500	18.4500	210	-3.69	NA	NA	3.9
Hungary	Süttő	Pupilla	crushed 5	47.7500	18.4500	210	-3.80	NA	NA	5.8
Hungary	Süttő	Pupilla	crushed 1	47.7500	18.4500	210	-4.29	NA	NA	5.8
Hungary	Süttő	Pupilla	crushed 1	47.7500	18.4500	210	-2.60	NA	NA	5.8
Hungary	Süttő	Pupilla	crushed 1	47.7500	18.4500	210	-2.29	NA	NA	5.8
Hungary	Süttő	Succinea	crushed 3	47.7500	18.4500	210	-3.66	NA	NA	5.8
Hungary	Süttő	Succinea	crushed 1	47.7500	18.4500	210	-4.02	NA	NA	5.8
Hungary	Süttő	Succinea	crushed 1	47.7500	18.4500	210	-3.42	NA	NA	5.8
Hungary	Süttő	Succinea	crushed 1	47.7500	18.4500	210	-4.21	NA	NA	5.8
Hungary	Süttő	Trichia	crushed 5	47.7500	18.4500	210	-3.65	NA	NA	5.8
Hungary	Süttő	Trichia	crushed 1	47.7500	18.4500	210	-3.45	NA	NA	5.8
Hungary	Süttő	Trichia	crushed 1	47.7500	18.4500	210	-4.22	NA	NA	5.8
Hungary	Süttő	Trichia	crushed 1	47.7500	18.4500	210	-4.89	NA	NA	5.8

Hungary	Úri	Pupilla	crushed 5	47.4167	19.5334	168	-3.94	20.0	NA	2.4
Hungary	Úri	Pupilla	crushed 1	47.4167	19.5334	168	-7.17	20.0	NA	2.4
Hungary	Úri	Pupilla	crushed 1	47.4167	19.5334	168	-3.53	20.0	NA	2.4
Hungary	Úri	Pupilla	crushed 1	47.4167	19.5334	168	-5.16	20.0	NA	2.4
Hungary	Úri	Trichia	crushed 3	47.4167	19.5334	168	-4.19	20.0	NA	2.4
Hungary	Úri	Trichia	crushed 1	47.4167	19.5334	168	-3.37	20.0	NA	2.4
Hungary	Úri	Trichia	crushed 1	47.4167	19.5334	168	-4.84	20.0	NA	2.4
Hungary	Úri	Trichia	crushed 1	47.4167	19.5334	168	-4.24	20.0	NA	2.4
Hungary	Úri	Pupilla	crushed 5	47.4167	19.5334	168	-2.04	20.0	NA	1.8
Hungary	Úri	Pupilla	crushed 1	47.4167	19.5334	168	-2.61	20.0	NA	1.8
Hungary	Úri	Pupilla	crushed 1	47.4167	19.5334	168	-1.50	20.0	NA	1.8
Hungary	Úri	Pupilla	crushed 1	47.4167	19.5334	168	-2.12	20.0	NA	1.8
Serbia	Petrovaradin	Trichia	crushed 3	45.2467	19.8795	85	-3.84	NA	NA	1.3
Serbia	Petrovaradin	Trichia	crushed 1	45.2467	19.8795	85	-3.39	NA	NA	1.3
Serbia	Petrovaradin	Trichia	crushed 1	45.2467	19.8795	85	-3.47	NA	NA	1.3
Serbia	Petrovaradin	Trichia	crushed 1	45.2467	19.8795	85	-3.47	NA	NA	1.3

## APPENDIX B: MODERN LAND SNAIL SHELL DATA

COUNTRY	SITE	GENUS	SAMPLING	LATITUDE (N)	LONGITUDE (E)	ALTITUDE	$\delta^{18}\text{O}$	AGE (ky)	AGE-ERROR (ky)	DEPTH (m)
Austria	Furth-Hohlweg	Cepea	crushed 5	48.3500	15.6200	240	-2.16	0	0	0
Austria	Furth-Hohlweg	Cepea	crushed 5	48.3500	15.6200	240	-2.83	0	0	0
Austria	Furth-Hohlweg	Cepea	crushed 5	48.3500	15.6200	240	-2.97	0	0	0
Austria	Furth-Hohlweg	Cepea	crushed 5	48.3500	15.6200	240	-3.04	0	0	0
Austria	Furth-Hohlweg	Helicopsis	crushed 5	48.3500	15.6200	240	-3.09	0	0	0
Austria	Furth-Hohlweg	Helicopsis	crushed 5	48.3500	15.6200	240	-3.03	0	0	0
Austria	Furth-Hohlweg	Helicopsis	crushed 5	48.3500	15.6200	240	-3.57	0	0	0
Austria	Furth-Hohlweg	Helicopsis	crushed 5	48.3500	15.6200	240	-3.52	0	0	0
Austria	Furth-Hohlweg	Zebrina	crushed 5	48.3500	15.6200	240	-2.45	0	0	0
Austria	Furth-Hohlweg	Zebrina	crushed 5	48.3500	15.6200	240	-2.17	0	0	0
Austria	Furth-Hohlweg	Zebrina	crushed 5	48.3500	15.6200	240	-2.40	0	0	0
Austria	Huhnertal	Bradybaena	crushed 5	48.5500	16.0667	260	-4.31	0	0	0
Austria	Krems	Bradybaena	crushed 5	48.4167	15.5900	290	-3.64	0	0	0
Austria	Krems	Bradybaena	crushed 5	48.4167	15.5900	290	-4.16	0	0	0
Austria	Krems	Bradybaena	crushed 5	48.4167	15.5900	290	-3.98	0	0	0
Austria	Krems	Bradybaena	crushed 5	48.4167	15.5900	290	-3.78	0	0	0
Austria	Krems	Cepea	crushed 5	48.4167	15.5900	290	-2.82	0	0	0
Austria	Krems	Cepea	crushed 5	48.4167	15.5900	290	-2.34	0	0	0
Austria	Krems	Cepea	crushed 5	48.4167	15.5900	290	-2.49	0	0	0
Austria	Krems	Helicopsis	crushed 5	48.4167	15.5900	290	-3.55	0	0	0
Austria	Krems	Helicopsis	crushed 5	48.4167	15.5900	290	-3.82	0	0	0
Austria	Krems	Helicopsis	crushed 5	48.4167	15.5900	290	-3.20	0	0	0
Austria	Krems	Helicopsis	crushed 5	48.4167	15.5900	290	-3.31	0	0	0
Austria	Krems	Zebrina	crushed 5	48.4167	15.5900	290	-3.57	0	0	0
Austria	Krems	Zebrina	crushed 5	48.4167	15.5900	290	-3.26	0	0	0
Austria	Krems	Zebrina	crushed 5	48.4167	15.5900	290	-3.14	0	0	0
Austria	Krems	Zebrina	crushed 5	48.4167	15.5900	290	-3.89	0	0	0
Austria	Stillfried	Cepea	crushed 5	48.4000	16.8300	165	-3.13	0	0	0
Austria	Stillfried	Cepea	crushed 5	48.4000	16.8300	165	-3.60	0	0	0
Austria	Stillfried	Cepea	crushed 5	48.4000	16.8300	165	-3.17	0	0	0
Austria	Stillfried	Helix	crushed 5	48.4000	16.8300	165	-2.06	0	0	0
Austria	Stillfried	Helix	crushed 5	48.4000	16.8300	165	-2.55	0	0	0
Austria	Stillfried	Helix	crushed 5	48.4000	16.8300	165	-2.57	0	0	0
Austria	Wolfstal	Bradybaena	crushed 5	48.5500	16.0800	264	-4.01	0	0	0
Austria	Wolfstal	Cepea	crushed 5	48.5500	16.0800	264	-3.49	0	0	0
Austria	Wolfstal	Cepea	crushed 5	48.5500	16.0800	264	-3.43	0	0	0
Austria	Wolfstal	Cepea	crushed 5	48.5500	16.0800	264	-3.29	0	0	0
Austria	Wolfstal	Helicopsis	crushed 5	48.5500	16.0800	264	-4.76	0	0	0
Austria	Wolfstal	Helicopsis	crushed 5	48.5500	16.0800	264	-4.83	0	0	0
Austria	Wolfstal	Helix	crushed 5	48.5500	16.0800	264	-2.15	0	0	0
Austria	Wolfstal	Helix	crushed 5	48.5500	16.0800	264	-2.39	0	0	0
Austria	Wolfstal	Helix	crushed 5	48.5500	16.0800	264	-2.83	0	0	0

Belgium	Harmignies	Trichia	crushed 5	50.4167	4.0000	51	-1.14	0	0	0
Belgium	Harmignies	Trichia	crushed 5	50.4167	4.0000	51	-2.42	0	0	0
Czech Republic	Kutna Horá	Bradybaena	crushed 5	49.9683	15.2917	220	-4.08	0	0	0
Czech Republic	Kutna Horá	Bradybaena	crushed 5	49.9683	15.2917	220	-4.39	0	0	0
Czech Republic	Kutna Horá	Bradybaena	crushed 5	49.9683	15.2917	220	-3.90	0	0	0
Czech Republic	Kutna Horá	Bradybaena	crushed 5	49.9683	15.2917	220	-3.48	0	0	0
Czech Republic	Kutna Horá	Helicopsis	crushed 5	49.9683	15.2917	220	-2.27	0	0	0
Czech Republic	Kutna Horá	Helicopsis	crushed 5	49.9683	15.2917	220	-2.31	0	0	0
Czech Republic	Kutna Horá	Helicopsis	crushed 5	49.9683	15.2917	220	-2.37	0	0	0
Czech Republic	Kutna Horá	Helicopsis	crushed 5	49.9683	15.2917	220	-2.44	0	0	0
Czech Republic	Kutna Horá	Helicopsis	crushed 5	49.9683	15.2917	220	-2.08	0	0	0
Czech Republic	Kutna Horá	Helicopsis	crushed 5	49.9683	15.2917	220	-3.06	0	0	0
Czech Republic	Kutna Horá	Helicopsis	crushed 5	49.9683	15.2917	220	-3.20	0	0	0
Czech Republic	Kutna Horá	Helix	crushed 5	49.9683	15.2917	220	-3.09	0	0	0
Czech Republic	Kutna Horá	Helix	crushed 5	49.9683	15.2917	220	-2.26	0	0	0
Czech Republic	Kutna Horá	Helix	crushed 5	49.9683	15.2917	220	-2.02	0	0	0
Germany	Nussloch	Helicodontia	crushed 5	49.1900	8.4200	213	-2.30	0	0	0
Germany	Nussloch	Helicodontia	crushed 5	49.1900	8.4200	213	-2.27	0	0	0
Germany	Nussloch	Helicodontia	crushed 5	49.1900	8.4200	213	-3.10	0	0	0
Germany	Nussloch	Helicodontia	crushed 5	49.1900	8.4200	213	-3.20	0	0	0
Germany	Offingen	Bradybaena	crushed 5	48.4800	10.3700	440	-3.61	0	0	0
Germany	Offingen	Bradybaena	crushed 5	48.4800	10.3700	440	-3.42	0	0	0

All modern shells were collected at the surface. In addition to the samples presented here, four modern shells were sampled at every 5 mm from the apex in order to determine intra-shell variability of oxygen isotopes (Appendix C). All samples that contain a mixture of 5 crushed shells were measured 3 times each.

## APPENDIX C: MODERN LAND SNAIL SHELL DATA BY DISTANCE FROM APEX

COUNTRY	SITE	GENUS	SAMPLING	LATITUDE (N)	LONGITUDE (E)	ALTITUDE (m)	$\delta^{18}\text{O}$
Austria	Furth-Hohlweg	Cepea	Apex	48.3500	15.6200	240	-3.30
Austria	Furth-Hohlweg	Cepea	1 mm	48.3500	15.6200	240	-2.97
Austria	Furth-Hohlweg	Cepea	5 mm	48.3500	15.6200	240	-3.87
Austria	Furth-Hohlweg	Cepea	10 mm	48.3500	15.6200	240	-3.24
Austria	Furth-Hohlweg	Cepea	15 mm	48.3500	15.6200	240	-2.40
Austria	Furth-Hohlweg	Cepea	20 mm	48.3500	15.6200	240	-3.77
Austria	Furth-Hohlweg	Cepea	25 mm	48.3500	15.6200	240	-4.16
Austria	Furth-Hohlweg	Cepea	30 mm	48.3500	15.6200	240	-3.24
Austria	Furth-Hohlweg	Cepea	35 mm	48.3500	15.6200	240	-2.50
Austria	Furth-Hohlweg	Cepea	40 mm	48.3500	15.6200	240	-2.61
Austria	Furth-Hohlweg	Cepea	45 mm	48.3500	15.6200	240	-2.70
Austria	Furth-Hohlweg	Cepea	50 mm	48.3500	15.6200	240	-3.21
Austria	Furth-Hohlweg	Cepea	55 mm	48.3500	15.6200	240	-2.38
Austria	Furth-Hohlweg	Cepea	60 mm	48.3500	15.6200	240	-2.45
Austria	Furth-Hohlweg	Cepea	65 mm	48.3500	15.6200	240	-2.39
Austria	Furth-Hohlweg	Cepea	70 mm	48.3500	15.6200	240	-3.42
Austria	Furth-Hohlweg	Cepea	75 mm	48.3500	15.6200	240	-2.75
Austria	Furth-Hohlweg	Cepea	80 mm	48.3500	15.6200	240	-1.11
Austria	Furth-Hohlweg	Cepea	85 mm	48.3500	15.6200	240	-1.01
Austria	Furth-Hohlweg	Cepea	90 mm	48.3500	15.6200	240	-1.39
Austria	Wolfstal	Cepea	Apex	48.5500	16.0800	264	-3.71
Austria	Wolfstal	Cepea	1 mm	48.5500	16.0800	264	-3.77
Austria	Wolfstal	Cepea	5 mm	48.5500	16.0800	264	-3.43
Austria	Wolfstal	Cepea	10 mm	48.5500	16.0800	264	-3.16
Austria	Wolfstal	Cepea	15 mm	48.5500	16.0800	264	-3.80
Austria	Wolfstal	Cepea	20 mm	48.5500	16.0800	264	-2.63
Austria	Wolfstal	Cepea	25 mm	48.5500	16.0800	264	-3.75
Austria	Wolfstal	Cepea	30 mm	48.5500	16.0800	264	-3.19
Austria	Wolfstal	Cepea	35 mm	48.5500	16.0800	264	-3.43
Austria	Wolfstal	Cepea	40 mm	48.5500	16.0800	264	-2.47
Austria	Wolfstal	Cepea	45 mm	48.5500	16.0800	264	-3.43
Austria	Wolfstal	Cepea	50 mm	48.5500	16.0800	264	-4.09
Austria	Wolfstal	Cepea	55 mm	48.5500	16.0800	264	-4.51
Austria	Wolfstal	Cepea	60 mm	48.5500	16.0800	264	-2.09
Austria	Wolfstal	Cepea	65 mm	48.5500	16.0800	264	-3.70
Austria	Wolfstal	Cepea	70 mm	48.5500	16.0800	264	-4.44
Austria	Wolfstal	Cepea	75 mm	48.5500	16.0800	264	-3.89
Austria	Wolfstal	Cepea	80 mm	48.5500	16.0800	264	-4.55
Austria	Wolfstal	Cepea	85 mm	48.5500	16.0800	264	-4.34
Austria	Wolfstal	Cepea	90 mm	48.5500	16.0800	264	-3.35
Austria	Wolfstal	Cepea	95 mm	48.5500	16.0800	264	-4.27
Austria	Wolfstal	Cepea	100 mm	48.5500	16.0800	264	-4.57
Austria	Wolfstal	Helix	Apex	48.5500	16.0800	264	-4.55
Austria	Wolfstal	Helix	1 mm	48.5500	16.0800	264	-4.41

Austria	Wolfstal	Helix	5 mm	48.5500	16.0800	264	-3.38
Austria	Wolfstal	Helix	10 mm	48.5500	16.0800	264	-3.44
Austria	Wolfstal	Helix	15 mm	48.5500	16.0800	264	-3.16
Austria	Wolfstal	Helix	20 mm	48.5500	16.0800	264	-3.43
Austria	Wolfstal	Helix	25 mm	48.5500	16.0800	264	-2.76
Austria	Wolfstal	Helix	30 mm	48.5500	16.0800	264	-1.11
Austria	Wolfstal	Helix	35 mm	48.5500	16.0800	264	-1.69
Austria	Wolfstal	Helix	40 mm	48.5500	16.0800	264	-2.18
Austria	Wolfstal	Helix	45 mm	48.5500	16.0800	264	-2.04
Austria	Wolfstal	Helix	50 mm	48.5500	16.0800	264	-3.92
Austria	Wolfstal	Helix	55 mm	48.5500	16.0800	264	-3.31
Austria	Wolfstal	Helix	60 mm	48.5500	16.0800	264	-3.00
Austria	Wolfstal	Helix	65 mm	48.5500	16.0800	264	-3.18
Austria	Wolfstal	Helix	75 mm	48.5500	16.0800	264	-2.32
Austria	Wolfstal	Helix	80 mm	48.5500	16.0800	264	-2.72
Austria	Wolfstal	Helix	85 mm	48.5500	16.0800	264	-4.61
Austria	Wolfstal	Helix	95 mm	48.5500	16.0800	264	-4.83
Austria	Wolfstal	Helix	100 mm	48.5500	16.0800	264	-3.89
Austria	Wolfstal	Helix	105 mm	48.5500	16.0800	264	-3.21
Austria	Wolfstal	Helix	110 mm	48.5500	16.0800	264	-2.76
Czech Republic	Kutna Hora	Cepea	Apex	49.9683	15.2917	220	-3.78
Czech Republic	Kutna Hora	Cepea	1 mm	49.9683	15.2917	220	-2.98
Czech Republic	Kutna Hora	Cepea	5 mm	49.9683	15.2917	220	-3.64
Czech Republic	Kutna Hora	Cepea	10 mm	49.9683	15.2917	220	-3.21
Czech Republic	Kutna Hora	Cepea	15 mm	49.9683	15.2917	220	-1.73
Czech Republic	Kutna Hora	Cepea	20 mm	49.9683	15.2917	220	-3.63
Czech Republic	Kutna Hora	Cepea	25 mm	49.9683	15.2917	220	-3.47
Czech Republic	Kutna Hora	Cepea	30 mm	49.9683	15.2917	220	-3.77
Czech Republic	Kutna Hora	Cepea	35 mm	49.9683	15.2917	220	-3.09
Czech Republic	Kutna Hora	Cepea	40 mm	49.9683	15.2917	220	-1.57
Czech Republic	Kutna Hora	Cepea	45 mm	49.9683	15.2917	220	-3.22
Czech Republic	Kutna Hora	Cepea	50 mm	49.9683	15.2917	220	-3.18
Czech Republic	Kutna Hora	Cepea	55 mm	49.9683	15.2917	220	-4.02
Czech Republic	Kutna Hora	Cepea	60 mm	49.9683	15.2917	220	-1.57
Czech Republic	Kutna Hora	Cepea	65 mm	49.9683	15.2917	220	-3.22
Czech Republic	Kutna Hora	Cepea	70 mm	49.9683	15.2917	220	-3.18
Czech Republic	Kutna Hora	Cepea	75 mm	49.9683	15.2917	220	-4.02
Czech Republic	Kutna Hora	Helix	Apex	49.9683	15.2917	220	-3.39
Czech Republic	Kutna Hora	Helix	1 mm	49.9683	15.2917	220	-3.44
Czech Republic	Kutna Hora	Helix	5 mm	49.9683	15.2917	220	-4.23
Czech Republic	Kutna Hora	Helix	10 mm	49.9683	15.2917	220	-2.63
Czech Republic	Kutna Hora	Helix	15 mm	49.9683	15.2917	220	-2.58
Czech Republic	Kutna Hora	Helix	20 mm	49.9683	15.2917	220	-3.11
Czech Republic	Kutna Hora	Helix	25 mm	49.9683	15.2917	220	-2.75
Czech Republic	Kutna Hora	Helix	30 mm	49.9683	15.2917	220	-2.72
Czech Republic	Kutna Hora	Helix	35 mm	49.9683	15.2917	220	-2.52
Czech Republic	Kutna Hora	Helix	40 mm	49.9683	15.2917	220	-2.31
Czech Republic	Kutna Hora	Helix	45 mm	49.9683	15.2917	220	-2.59
Czech Republic	Kutna Hora	Helix	50 mm	49.9683	15.2917	220	-3.02

Czech Republic	Kutna Hora	Helix	55 mm	49.9683	15.2917	220	-3.42
Czech Republic	Kutna Hora	Helix	60 mm	49.9683	15.2917	220	-3.39
Czech Republic	Kutna Hora	Helix	65 mm	49.9683	15.2917	220	-2.79
Czech Republic	Kutna Hora	Helix	70 mm	49.9683	15.2917	220	-2.45
Czech Republic	Kutna Hora	Helix	75 mm	49.9683	15.2917	220	-2.26
Czech Republic	Kutna Hora	Helix	80 mm	49.9683	15.2917	220	-2.22
Czech Republic	Kutna Hora	Helix	85 mm	49.9683	15.2917	220	-2.30
Czech Republic	Kutna Hora	Helix	90 mm	49.9683	15.2917	220	-1.96
Czech Republic	Kutna Hora	Helix	95 mm	49.9683	15.2917	220	-3.23
Czech Republic	Kutna Hora	Helix	100 mm	49.9683	15.2917	220	-1.62
Czech Republic	Kutna Hora	Helix	110 mm	49.9683	15.2917	220	-2.10

All modern samples were collected at the surface (0 m) at each location. Samples were drilled with a carbide dental burr, and all layers of the shell were sampled.