

Supplement for
Speleothem records from Eastern Europe & Turkey
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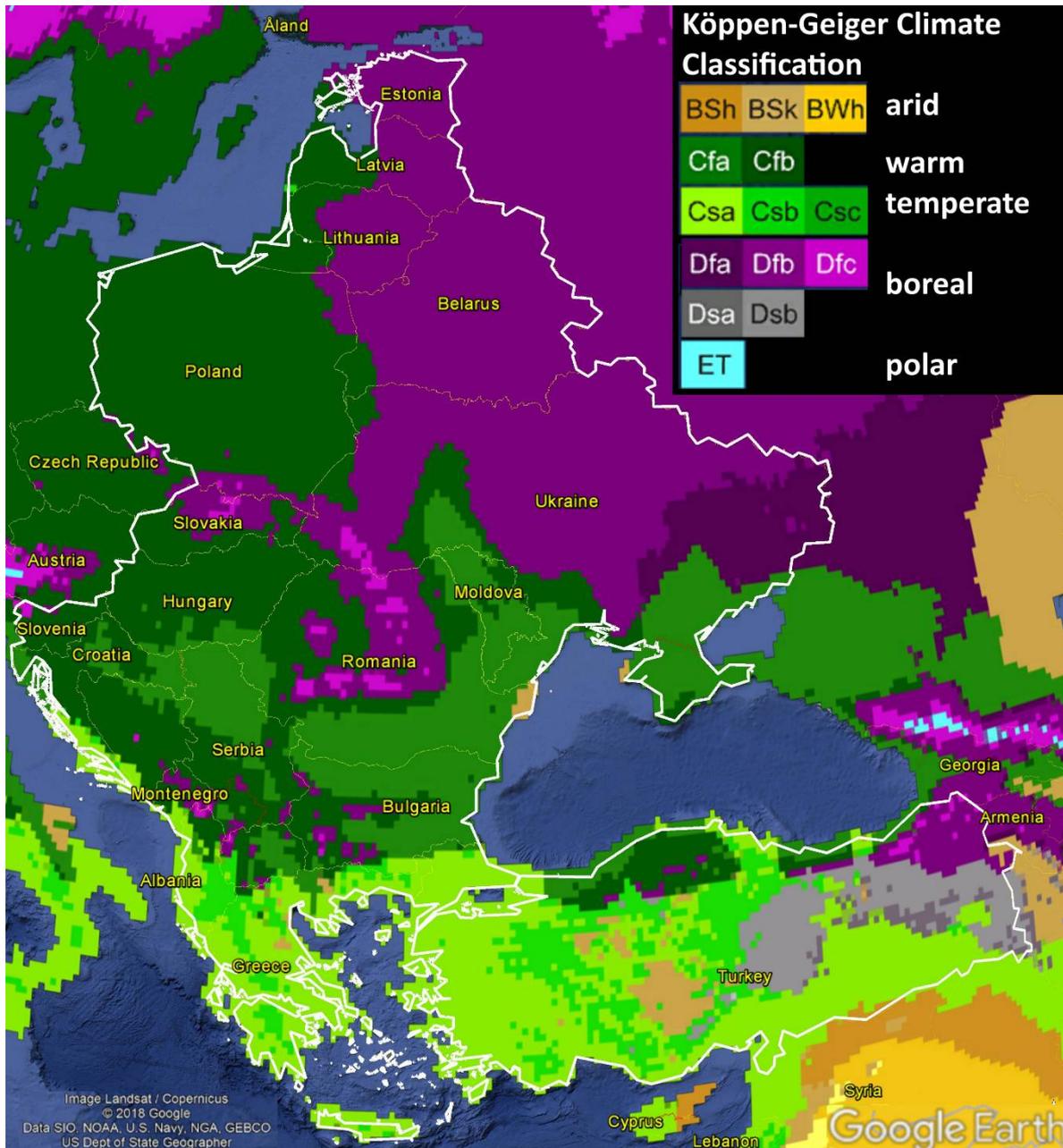


Figure S1. Climate of the Eastern Europe & Turkey SISAL region. Köppen-Geiger climate classification based on data for the period 1951 to 2000 {Kottek, 2006 #559; Rubel, 2017 #766}. The white hairline outlines the Eastern Europe & Turkey SISAL region. The base map was taken from [Google Maps, 2016](#)

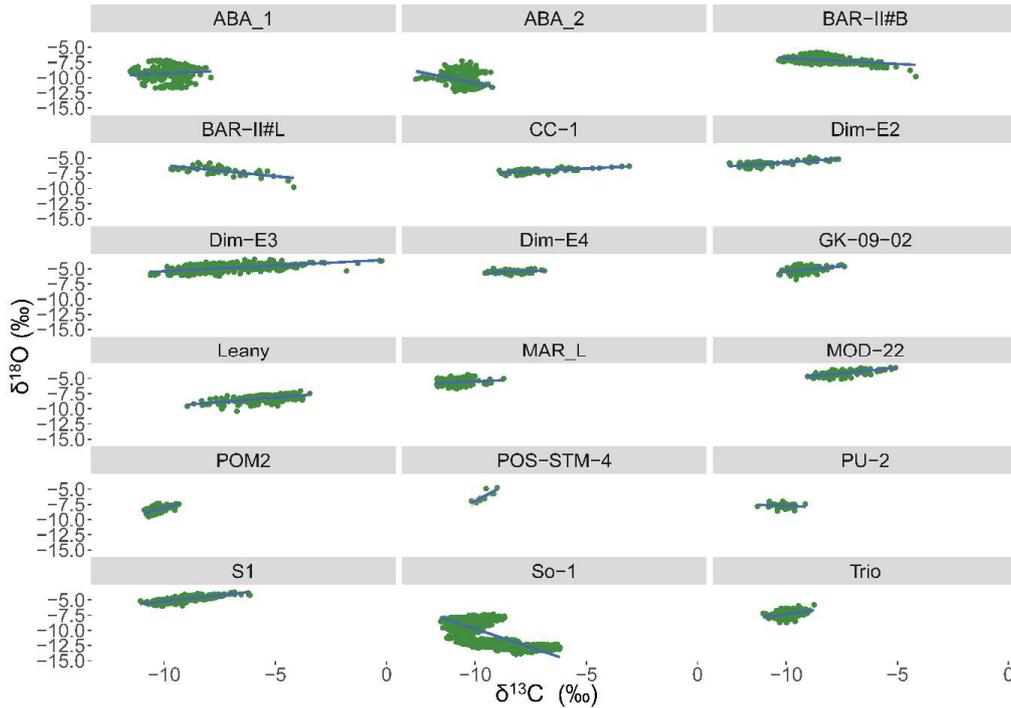


Figure S2. $\delta^{13}\text{C}$ vs. $\delta^{18}\text{O}$ where the blue lines mark the least squares regression lines. The statistics of the plotted regression models can be found in Table S1.

Table S1. Statistics for the regression models $\delta^{13}\text{C}$ vs. $\delta^{18}\text{O}$.

entity_name	Model					Intercept			Estimated $\delta^{18}\text{O}$		
	R^2	adj. R^2	σ	p.value	df	Coeff.	std.error	p.value	Value	std.error	p.value
ABA_1	0.012	0.009	0.729	0.044	2	-9.32	0.34	7.562E-88	0.07	0.04	4.450E-02
PU-2	0.035	0.009	0.446	0.252	2	-12.00	0.21	9.068E-206	-0.14	0.02	5.592E-12
MAR_L	0.031	0.026	0.451	0.011	2	-17.18	0.70	7.842E-88	-1.24	0.10	1.368E-31
Dim-E4	0.059	0.039	0.671	0.089	2	-16.61	1.31	4.408E-18	-1.28	0.18	4.836E-09
ABA_2	0.103	0.101	0.479	0.000	2	11.62	2.04	1.354E-07	2.64	0.29	6.535E-15
GK-09-02	0.165	0.161	0.466	0.000	2	1.54	1.27	2.275E-01	2.08	0.21	1.694E-15
Trio	0.166	0.163	0.409	0.000	2	0.89	0.59	1.281E-01	1.67	0.12	1.136E-37
BAR-II#B	0.240	0.238	0.995	0.000	2	-4.89	2.03	1.990E-02	0.64	0.37	8.911E-02
Dim-E3	0.312	0.311	1.381	0.000	2	-6.61	0.44	7.630E-34	0.50	0.08	1.767E-08
Leany	0.321	0.317	0.902	0.000	2	3.47	0.97	4.509E-04	1.09	0.12	1.923E-17
POM2	0.347	0.343	0.252	0.000	2	-9.66	0.41	1.565E-60	0.19	0.07	1.056E-02
BAR-II#L	0.460	0.451	0.948	0.000	2	-2.05	0.54	2.218E-04	1.29	0.13	5.522E-17
CC-1	0.464	0.458	0.898	0.000	2	-7.19	0.35	1.923E-45	0.37	0.04	2.141E-15
MOD-22	0.476	0.471	0.632	0.000	2	-7.40	0.53	7.131E-07	0.35	0.09	3.299E-03
Dim-E2	0.523	0.518	0.846	0.000	2	-12.08	1.60	5.461E-09	-0.24	0.21	2.518E-01
So-1	0.584	0.584	0.816	0.000	2	-1.68	0.31	1.161E-07	1.52	0.06	1.738E-75
S1	0.618	0.617	0.523	0.000	2	-14.47	0.07	0.000E+00	-0.48	0.01	0.000E+00
POS-STM-4	0.681	0.641	0.219	0.003	2	-7.55	0.32	1.520E-69	0.32	0.04	8.464E-13



Figure S3. Temporal span of individual speleothem records in the Eastern Europe & Turkey SISAL region for (a) $\delta^{18}\text{O}$ and (b) $\delta^{13}\text{C}$ for the Holocene.