

### Supporting Online Material

This file contains supporting online material that relates to the following publication:

H. Hemmerle <sup>1,2</sup>, R. van Geldern <sup>1,\*</sup>, T. R. Juhlke <sup>1</sup>, F. Huneau <sup>2,3</sup>, E. Garel <sup>2,3</sup>, S. Santoni <sup>2,3</sup>, J.A.C. Barth <sup>1</sup>

Altitude isotope effects in high-relief terrains: A correction method to utilize stream water data with field test on the Mediterranean island of Corsica (France)

Hydrological Science Journal, 2021

Author affiliations:

<sup>1</sup> GeoZentrum Nordbayern, Department Geographie und Geowissenschaften, Friedrich-Alexander Universität Erlangen-Nürnberg (FAU), Schlossgarten 5, 91054 Erlangen, Germany

<sup>2</sup> Institute of Geosciences and Geography, Martin Luther University Halle-Wittenberg, Von-Seckendorff-Platz 3, 06120 Halle, Germany

<sup>3</sup> Université de Corse Pascal Paoli, Faculté des Sciences et Techniques, Département d'Hydrogéologie, F-20250 Corte, France

<sup>4</sup> CNRS, UMR 6134 SPE, F-20250 Corte, France

\*correspondence to: robert.van.geldern@fau.de

### Content

**Table S1:** Oxygen and hydrogen stable isotope ratios of river water samples

**Table S2:** Field sampling dates

Table S1. Oxygen and hydrogen stable isotope ratios of river water samples taken between February 2016 and February 2017.

ID	type	Lat	Lon	altitude	Feb 16	May 16	Jul 16	Oct 16	Feb 17	Feb 16	May 16	Jul 16	Oct 16	Feb 17
		°N	°E	m a.s.l.	$\delta^{18}\text{O}$ /‰ vs VSMOW					$\delta^2\text{H}$ /‰ vs VSMOW				
1	Tavignanu	42.253	8.944	1746	-9.25	-8.56	-6.97	-7.17	n.s. <sup>a</sup>	-59.9	-55.9	-47.6	-49.4	n.s.
2	Tavignanu	42.254	8.958	1726	-9.46	-8.88	-8.88	-8.18	n.s.	-61.4	-58.1	-58.3	-54.6	n.s.
3	Tavignanu	42.308	9.142	429	n.s.	n.s.	n.s.	-8.33	-9.33	n.s.	n.s.	n.s.	-54.7	-59.3
4	Tavignanu	42.304	9.147	409	-9.04	-8.74	-8.12	-8.17	-9.30	-59.5	-57.7	-54.7	-55.2	-58.9
5	Tavignanu	42.299	9.178	353	-8.93	-9.25	-8.48	-8.69	-9.22	-59.5	-60.5	-56.8	-56.9	-58.4
6	Tavignanu	42.266	9.217	263	-8.90	-9.18	-8.32	-8.47	-8.72	-59.3	-60.7	-55.2	-55.5	-54.4
7	Tavignanu	42.222	9.265	170	-8.40	-8.84	-7.92	-8.31	-8.33	-55.3	-57.6	-52.5	-53.7	-51.0
8	Tavignanu	42.211	9.325	132	-8.38	-8.76	-7.67	-8.29	-8.21	-54.5	-56.8	-51.4	-53.0	-50.1
9	Tavignanu	42.182	9.387	72	-8.39	-8.66	-7.42	-8.16	-8.11	-55.1	-55.9	-50.4	-52.7	-49.8
10	Tavignanu	42.155	9.433	16	-8.36	-8.60	-7.30	-7.99	-8.03	-54.8	-56.1	-48.8	-51.7	-48.5
11	Tavignanu	42.112	9.514	0	-8.36	-8.49	(-6.10) <sup>b</sup>	(-7.64) <sup>b</sup>	-7.89	-54.4	-55.4	(-40.2) <sup>b</sup>	(-49.4) <sup>b</sup>	-47.7
R1	Restonica	42.214	9.024	1710	-9.18	-8.89	-8.04	-8.05	n.s.	-59.1	-57.4	-53.1	-53.0	n.s.
R2	Restonica	42.221	9.024	1526	-9.10	-8.84	-8.44	-8.12	n.s.	-58.2	-57.2	-55.1	-53.5	n.s.
R3	Restonica	42.237	9.039	1267	-9.18	-9.00	-8.38	-8.57	n.s.	-60.0	-59.2	-55.1	-56.1	n.s.
R4	Restonica	42.258	9.072	939	-9.20	-9.15	-8.86	-8.79	n.s.	-60.7	-60.2	-58.4	-57.2	n.s.
R5	Restonica	42.275	9.107	645	-9.12	-9.42	-9.04	-8.99	-9.46	-60.8	-62.3	-59.8	-58.2	-61.1
R6	Restonica	42.289	9.132	471	-8.92	-9.31	-8.98	-8.85	-9.43	-59.6	-60.8	-59.5	-57.9	-60.6
T1	tributary	42.313	9.151	427	-8.94	-8.72	-8.44	-8.22	-8.72	-59.5	-56.8	-54.5	-54.2	-54.0
T2	tributary	42.284	9.239	312	-7.97	-7.96	-7.34	-7.76	-8.15	-50.5	-50.1	-46.6	-48.9	-49.8
T3	tributary	42.228	9.243	188	-8.08	-8.52	-7.96	-8.26	-8.28	-52.2	-54.7	-51.7	-52.9	-50.7
T4	tributary	42.178	9.416	38	-6.98	-6.48	-6.22	-5.21	-7.24	-42.2	-39.6	-38.1	-31.8	-41.1
T5	tributary	42.103	9.503	2	-7.15	-7.26	-6.38	-7.08	-7.26	-44.1	-44.8	-40.8	-45.4	-42.2

<sup>a</sup> n.s. - not sampled

<sup>b</sup> influenced by seawater indicated by electric conductivity

Table S2. Field sampling dates (dd mmm yyyy).

site ID	Tavignanu (source lakes) 1 and 2	Tavignanu and Tributaries 3 to 11 / T1 to T5	Restonica R1 to R6
Feb 16	18 Feb 2016	15 Feb 2016	16 Feb 2016
May 16	27 May 2016	26 May 2016	25 May 2016
Jul 16	26 Jul 2016	24 Jul 2016	25 Jul 2016
Oct 16	27 Oct 2016	27 Oct 2016	25 Oct 2016
Feb 17	not accessible	13 and 15 Feb 2017 <sup>a</sup>	

<sup>a</sup> sites R1 to R4 not accesbile