

Table S1. Supporting information. Correlations (r) between partition coefficients (D_{Me}) and somatic growth rates and vertebral precipitation rates for the temperature (T) experiment. The number (n) of round rays (*Urotrygon halleri*) included in growth rate estimates, observed range of individual somatic growth rates (mm disc width month $^{-1}$), and vertebral precipitation rates ($\mu\text{m radius month}^{-1}$) are reported for each treatment. No significant correlations were detected ($p \geq 0.12$).

Somatic growth rate				Precipitation rate			
Treatment	D_{Me}	r	p	Treatment	D_{Me}	r	p
T = 15 °C	Li	0.288	0.162	T = 15 °C	Li	0.041	0.970
n = 32	Mg	0.035	0.849	n = 28	Mg	0.408	0.213
Range: 0.5-3.3 mm month $^{-1}$	Mn	0.269	0.174	Range: 5.5-31.2 $\mu\text{m month}^{-1}$	Mn	0.017	0.960
	Zn	0.119	0.545		Zn	0.323	0.333
	Sr	0.296	0.127		Sr	0.297	0.324
	Ba	0.051	0.779		Ba	0.275	0.388
T = 18 °C	Li	0.289	0.181	T = 18 °C	Li	0.219	0.472
n = 33	Mg	0.298	0.103	n = 30	Mg	0.193	0.473
Range: 1.4-4.5 mm month $^{-1}$	Mn	0.173	0.369	Range: 12.8-49.6 $\mu\text{m month}^{-1}$	Mn	0.245	0.379
	Zn	0.280	0.128		Zn	0.320	0.226
	Sr	0.184	0.323		Sr	0.337	0.202
	Ba	0.029	0.889		Ba	0.283	0.307
T = 24 °C	Li	0.248	0.215	T = 24 °C	Li	0.023	0.919
n = 33	Mg	0.208	0.246	n = 30	Mg	0.117	0.552
Range: 3.6-8.0 mm month $^{-1}$	Mn	0.202	0.272	Range: 36.7-101.0 $\mu\text{m month}^{-1}$	Mn	0.037	0.855
	Zn	0.139	0.465		Zn	0.318	0.121
	Sr	0.193	0.282		Sr	0.089	0.653
	Ba	0.264	0.166		Ba	0.109	0.603