

Electronic Supplementary Material for:

Population niche width is driven by within-individual niche expansion and individual specialization in introduced Brook Trout in mountain lakes

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Appendix S1

Additional Tables and Figures

Table A1. Environmental characteristics and population niche composition of Brook Trout for prey size and taxonomic diversity. P-values denote the probability that the degree of individual specialization (BIC/PNW_{size} or E_{adj}) is significantly greater than expected if individuals sample randomly from a shared distribution.

Lake	Elevation (m)	Surface Area (ha)	Sample Size	PNW_{size}	WIC/ PNW_{size}	BIC/ PNW_{size}	P-value [BIC/ PNW_{size}]	PNW_{taxa}	WIC/ PNW_{taxa}	BIC/ PNW_{taxa}	E_{adj}	P-value [E_{adj}]
Lukens	2508	4.08	7	41.38	0.69	0.31	0.06	0.50	0.48	0.52	0.78	1.00
Sunrise 1	2801	2.69	18	30.69	0.63	0.37	<0.05	1.65	0.65	0.35	0.55	<0.05
May	2845	20.52	16	8.64	0.26	0.74	<0.05	0.55	0.37	0.63	0.18	1.00
Sunrise 3	2882	4.57	19	7.35	0.46	0.54	0.06	1.23	0.41	0.59	0.45	<0.05
Elizabeth	2897	9.89	11	7.00	0.03	0.97	0.16	1.20	0.26	0.74	0.45	1.00
Greenstone	3092	7.79	11	4.59	0.33	0.67	<0.05	1.74	0.45	0.55	0.52	<0.01
Steelhead	3137	8.38	5	12.73	0.48	0.52	0.16	0.56	0.34	0.66	0.10	0.83
Cascade	3147	2.04	12	4.01	0.38	0.62	<0.001	0.61	0.54	0.46	0.57	1.00
Gaylor 1	3150	8.71	42	5.86	0.24	0.76	<0.001	1.94	0.48	0.52	0.48	1.00
Spillway	3190	5.12	18	6.51	0.26	0.74	<0.001	1.98	0.53	0.47	0.52	<0.001
Gaylor 2	3204	3.86	28	7.00	0.34	0.66	<0.05	1.79	0.31	0.69	0.35	0.84
Gardisky	3206	6.24	9	7.54	0.49	0.51	<0.001	0.25	0.46	0.54	0.01	0.84
Helen	3337	21.00	33	3.48	0.26	0.74	<0.001	1.94	0.32	0.68	0.38	0.98

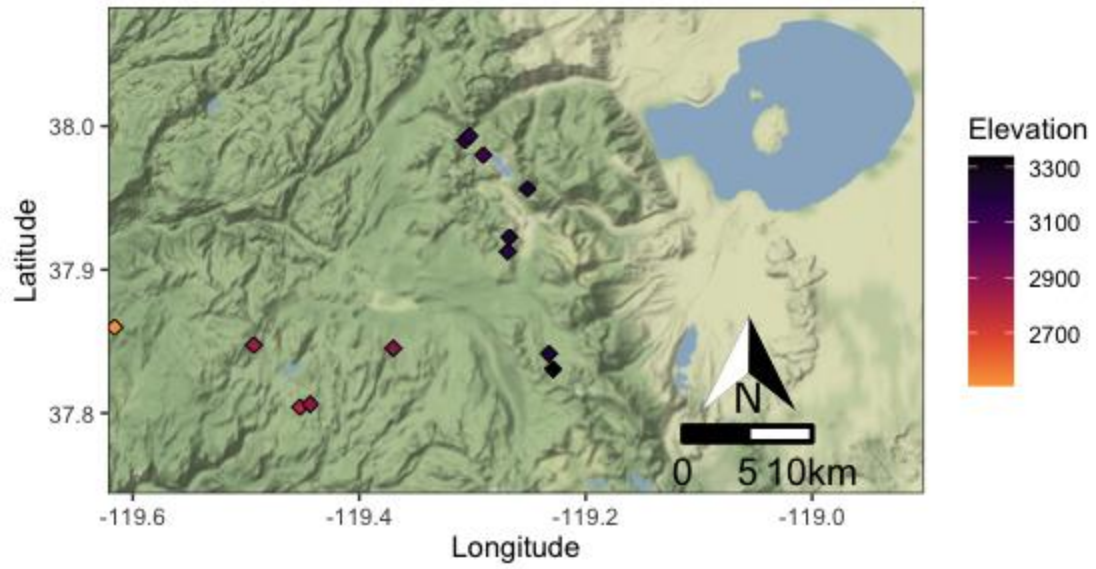


Figure A1. Map of study sites in and near Yosemite National Park, California, USA, with elevation shown in meters.

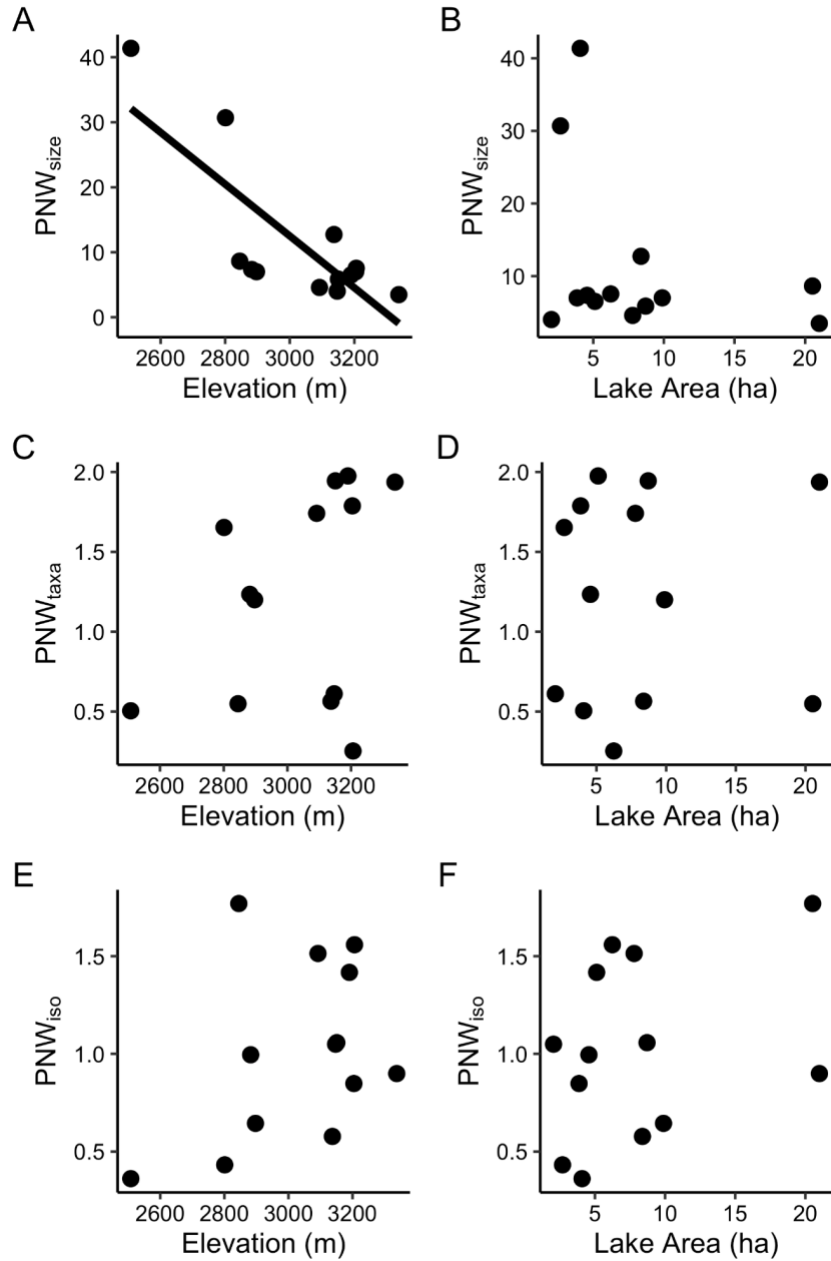


Figure A2. Variation in population niche width with lake elevation and size for three axes of the brook trout resource use niche: prey size distribution (PNW_{size}) (A–B), prey taxonomic composition (PNW_{taxa}) (C–D), and brook trout isotopic composition ($\delta^{13}C$ and $\delta^{15}N$; PNW_{iso}) (E–F). Note that panels A & B are identical to Figure 1 in the main text, but are duplicated here for clarity.

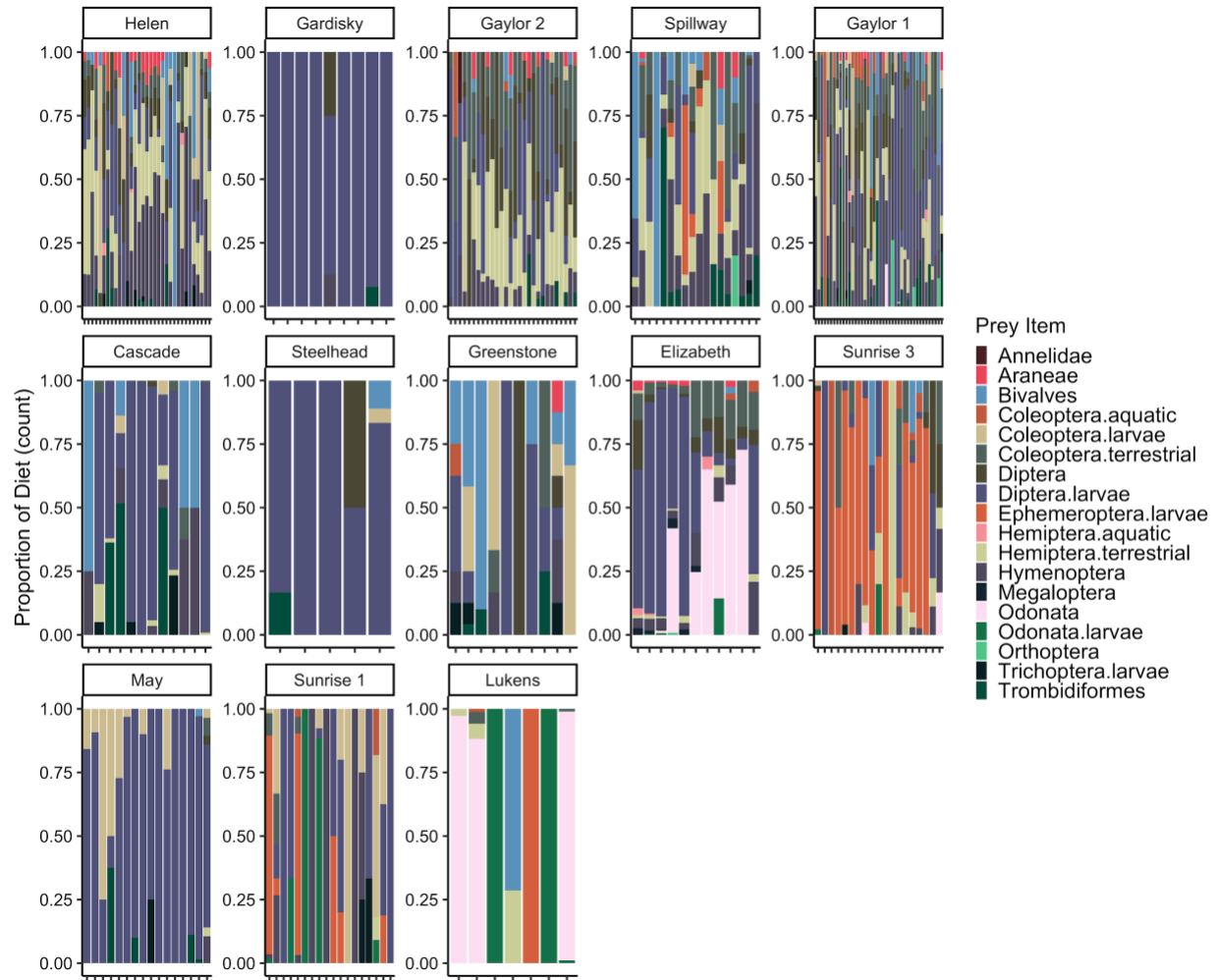


Figure A3. The taxonomic composition of Brook Trout diets for each lake, arranged in descending order of elevation. Each vertical bar represents an individual fish.

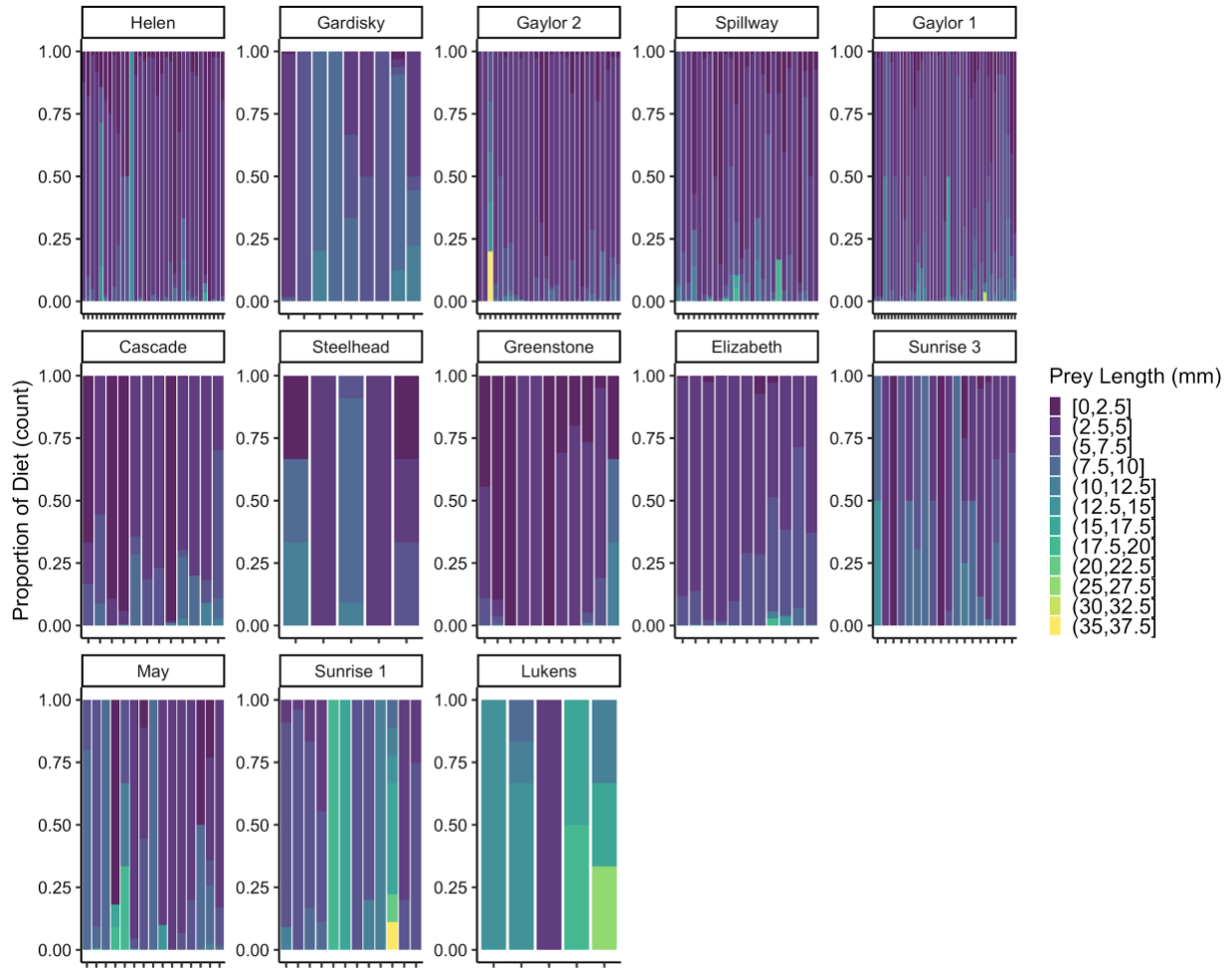


Figure A4. The prey length distribution of Brook Trout diets for each lake, arranged in descending order of elevation. Each vertical bar represents an individual fish.