Environmental warming increases the importance of high-turnover energy channels in stream food webs

James R. Junker1,2,✉, Wyatt F. Cross1, James M. Hood3,4, Jonathan P. Benstead5, Alexander D. Huryn5, Daniel Nelson6, Jón S. Ólafsson7, and Gísli M. Gíslason8

1 Department of Ecology, Montana State University, Bozeman, MT 59717, USA  
2 Current address: Department of Biological Sciences, University of North Texas, Denton, TX 76203, USA  
3 The Aquatic Ecology Laboratory, Department of Evolution, Ecology, and Organismal Biology, The Ohio State University, Columbus, OH 43212, USA  
4 Translational Data Analytics Institute, The Ohio State University, Columbus, OH 43212, USA  
5 Department of Biological Sciences, University of Alabama, Tuscaloosa, AL 35487, USA  
6 National Aquatic Monitoring Center, Department of Watershed Sciences, Utah State University, Logan, UT 84322, USA  
7 Institute of Marine and Freshwater Fisheries, Hafnarfjördur, Iceland  
8 University of Iceland, Institute of Life and Environmental Sciences, Reykjavík, Iceland

✉ Correspondence: [James R. Junker <[james.junker@unt.edu](mailto:james.junker@unt.edu)>](mailto:james.junker@unt.edu)

Submission journal: Ecology

Open Research Statement: All data and code used in this work are publicly available and archived at the following link: <https://zenodo.org/doi/10.5281/zenodo.10455904>.

Key words: climate change; energy flux; environmental filtering; food webs; species traits; temperature