



DR. KURT D. FAUSCH

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Linked for Life: the importance of sustaining hidden connections for conservation in streams

Date & Time: February 21 (Tuesday), 2012, 2:00-3:00 PM (Seminar); 3:00-4:00 PM (Reception with Graduate Students)

Place: Hidatsa, Memorial Union

Sponsor: North Dakota Water Resources Research Institute

Co-Sponsors: Environmental and Conservation Sciences, Civil Engineering, Agricultural and Biological Engineering, and School of Natural Resources Sciences

Abstract: Streams are subject to multiple stressors that threaten their biota, including direct destruction of in-stream habitat, flow diversion and groundwater pumping, land uses like logging and grazing that degrade riparian zones, and ongoing changes to climate. Unfortunately, despite the wide-ranging effects of these stressors across stream-riparian ecosystems, the information ecologists have to conserve or restore stream biota is often quite restricted in space and time, and to certain groups of organisms. Here I present research conducted primarily over the last decade showing that stream habitat for fishes is closely linked across extensive “riverscape” scales by fish movement, and that stream and riparian predators are closely linked by fluxes of invertebrate prey in both directions to and from riparian zones. Therefore, efforts to conserve fishes in streams, and riparian organisms like birds, bats, lizards, and spiders, must address the effects of multiple stressors on these linkages to be effective. Moreover, we will also need to understand what is essential about streams for humans if we are to generate support for their conservation.



SPEAKER: DR. KURT D. FAUSCH

The Distinguished Water Seminar Series brings eminent professionals to NDSU to give presentations with focus on emerging issues, challenges, and new research directions in hydrology and water resources. The speaker for the 2nd seminar is Dr. Kurt Fausch, Professor in the Department of Fish, Wildlife, and Conservation Biology at Colorado State University, where he has worked for 30 years. He teaches Fish Conservation Biology and a graduate course in Community Ecology, and is active in the Graduate Degree Program in Ecology. He and his students and collaborators conduct basic and applied research on streams, stream fish, and their connections with riparian ecosystems. His collaborative research has taken him worldwide, and especially to Hokkaido in northern Japan where he worked with colleagues over a 15-year period. These experiences were chronicled in the documentary film *RiverWebs*, directed and produced by Jeremy Monroe of Freshwaters Illustrated, which has been broadcast to >100 million homes nationwide on PBS. He has received several prestigious awards for his research and outreach, including the first International Fisheries Science Prize from the World Council of Fisheries Societies (2008) and Awards of Excellence from the American Fisheries Society (2010). He serves on the Independent Science Advisory Board of the Northwest Power and Conservation Council, which advises managers of the Columbia River about fish and wildlife conservation. Kurt is currently writing a book for a popular audience with the goal of engaging the public in understanding the interconnections between streams and rivers and their landscapes, and the importance of conserving these ecosystems.



All interested faculty and students in hydrology, water resources, aquatic ecology, and fisheries conservation are welcome to attend the seminar and participate in discussions/meeting thereafter. For additional information, please contact Dr. G. Padmanabhan (g.padmanabhan@ndsu.edu, 1-7043), Dr. Craig Stockwell (craig.stockwell@ndsu.edu, 1-8449), or Dr. Xuefeng Chu (xuefeng.chu@ndsu.edu,