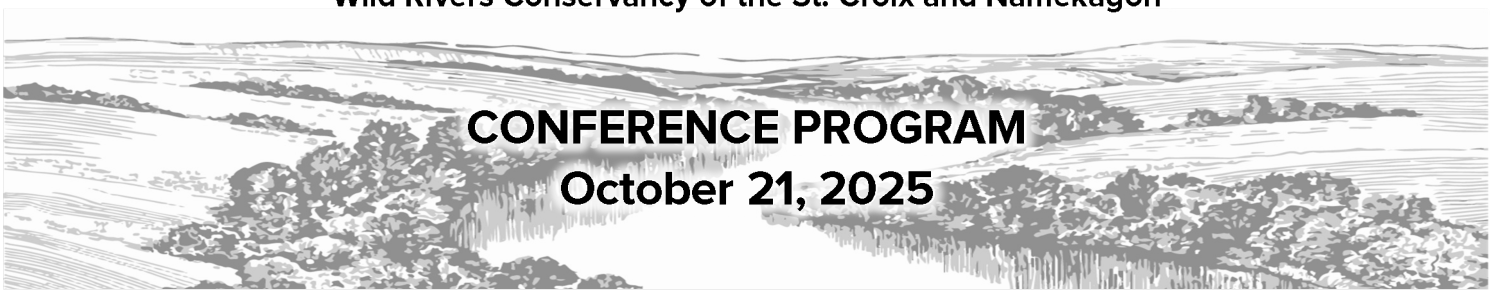
34th Annual

ST. CROIX RIVER RESEARCH RENDEZVOUS

St. Croix Watershed Research Station | Science Museum of Minnesota

Wild Rivers Conservancy of the St. Croix and Namekagon



8:30 a.m. **Registration & Continental Breakfast**

9:00 a.m. **INTRODUCTION AND ANNOUNCEMENTS:** Greg Gentle, Director, The Acreage at Osceola; Matt Poppleton, Executive Director, Wild Rivers Conservancy; Dr. Adam Heathcote, Director, Department of Water and Climate, Science Museum of Minnesota

SPECIAL PRESENTATION: MINNESOTA'S GREATEST ENVIRONMENTAL INVESTMENT

9:10 a.m. For three decades, Minnesotans have invested in projects through the Environment and Natural Resources Trust Fund to preserve and protect our state's natural resources. The Science Museum of Minnesota is highlighting the impacts of these investments through a series of engaging short films.

SESSION 1: SIGNALS FROM THE RIVER – ECOLOGY, CHEMISTRY, & HISTORY

(moderator Dr. Mark Edlund)

9:25 a.m. **Water Chemistry and Chironomidae of the St. Croix River: A Longitudinal Assessment of Seasonal and Spatial Distributions** — Alexander Egan[1], David Burge[2], Al Kirschbaum[1], Leonard C. Ferrington, Jr.[3] : [1]National Park Service, Great Lakes Inventory & Monitoring Network, [2]Science Museum of Minnesota, St. Croix Watershed Research Station, [3]University of Minnesota

9:45 a.m. **Ancient Bison Remains Reflecting Multiple Ontogenetic Stages from the Sunrise River (Wyoming, Minnesota)** — Alex Hastings[1], Nicole Dzenowski[1] : [1]Science Museum of Minnesota, Department of Paleontology

10:05 a.m. **Waters and Wetlands Research Group: Long Term Monitoring of Valley Creek** — Dllona Clendenen[1], Lisa Peterson[1], Don Wendel[1], Jeffery Brenner[1], Michael Ramsey[1], Isabelle Knighton[1] : [1]Waters and Wetlands Research Group

10:25 a.m. **BREAK** (15 minutes)

SESSION 2: RESEARCHING NON-NATIVE SPECIES IN THE WATERSHED

(moderator Dr. Erin Mittag)

10:40 a.m. **Using Plants to Control Buckthorn** — Mike Schuster[1,2] : [1]University of Minnesota, Department of Forestry Resources, [2]Hamline University, Biology Department

11:00 a.m. **Revegetation Provides Broad-Scale Efficacy to Inhibit the Growth of *Rhamnus cathartica* Seedlings Across the State of Minnesota** — Mark E. Fuka[1], Mike Schuster[1] : [1]University of Minnesota, Department of Forestry Resources

11:20 a.m. **Fungi Associated with Dying Invasive Buckthorn as Prospects for Biocontrol of Invasive Buckthorn in Minnesota** — Ryan D. M. Franke[1], Robert A. Blanchette[1] : [1] University of Minnesota, Department of Plant Pathology

11:40 a.m. **Got Rock Snot? What We've Learned from Lake Superior Tributaries to Protect St. Croix Trout Streams** — Kui Hu[1], Jackalyn Wyrobek[1], Mark B. Edlund[1], Heidi Rantala[2], David R.L. Burge[1,3], Adam J. Heathcote[1], Robert Pillsbury[4], Mari Leland[1,5] : [1]Science Museum of Minnesota, St. Croix Watershed Research Station, [2]Minnesota Department of Natural Resources–Duluth, [3]University of Minnesota, Natural Resources Research Institute, [4]University of Wisconsin–Oshkosh, Department of Biology and Microbiology, [5]Michigan Technological University, Department of Biological Sciences

NOON **POSTER SESSION** (15 minutes)

12:30 p.m. **LUNCH** (60 minutes)

SESSION 3: CONSERVATION AND FRESHWATER BIOLOGY

(moderator Dr. Lienne Sethna)

1:30 p.m. **Lake Sturgeon Monitoring in the Lower St. Croix River** — Dustin Schurrer[1] : [1]Wisconsin Department of Natural Resources

1:50 p.m. **American Bullfrogs in the St Croix and Beyond: Using eDNA Surveys to Detect Nonnative Amphibians in Minnesota** — Luke Tonsfeldt[1], Ken Kozak[1] : [1]University of Minnesota

2:10 p.m. **Namekagon River Mussels: A Peek Below the Surface** — Abigail Charleson[1], Mark Hove[1], Marian Shaffer[2], Toben LaFrancois[3], Byron Karns[4], and Dan Hornbach[5] : [1]University of Minnesota, Department of Fisheries, Wildlife, and Conservation Biology, [2]National Park Service—Saint Croix National Scenic Riverway, [3]Burke Center for Ecosystem Research, [4]One Pine Aquatic Resources Assessments, [5]Macalester College, Department of Environmental Studies

2:30 p.m. **Meticulously Managing Minnesota's Museum Mollusks for Maximal Mobilization** — Dakota M. Rowsey[1], Catherine M. Early[1] : [1]Science Museum of Minnesota, Biology Department

2:50 p.m. **Rearing Zebra Mussels to Support Aquatic Invasive Species Control Research** — Ben Minerich[1,2], Seth Stapleton[1,2], John Gerritsen[1,2] : [1]Minnesota Zoo, [2]University of Minnesota, Aquatic Invasive Species Research Center

3:10 p.m. **BREAK** (15 minutes)

SESSION 4: INNOVATIONS IN WATERSHED MANAGEMENT

(moderator Dr. Adam Heathcote)

3:25 p.m. **Addressing 21st Century Challenges for the St. Croix** — Jason Ulrich[1], Mark Edlund[1] : [1]Science Museum of Minnesota, St. Croix Watershed Research Station

3:45 p.m. **Forest Health in the Saint Croix National Scenic Riverway: The Times They Are A-Changin'** — Michael Rhoades[1] : [1]National Park Service, Saint Croix National Scenic Riverway

4:05 p.m. **EcoFIP: A Toolbox for Assessing Multi-benefit Floodplain Restoration Opportunities** — Luke Tillmann[1] : [1]Verdantas Eco-engineering Department

4:25 p.m. **NutriSink: Not Just for Breakfast Anymore, *A Spatial Prioritization Tool for Floodplain Restoration to Improve Water Quality*** — Jeremy Williamson[1] : [1]Verdantas Eco-Engineering Department

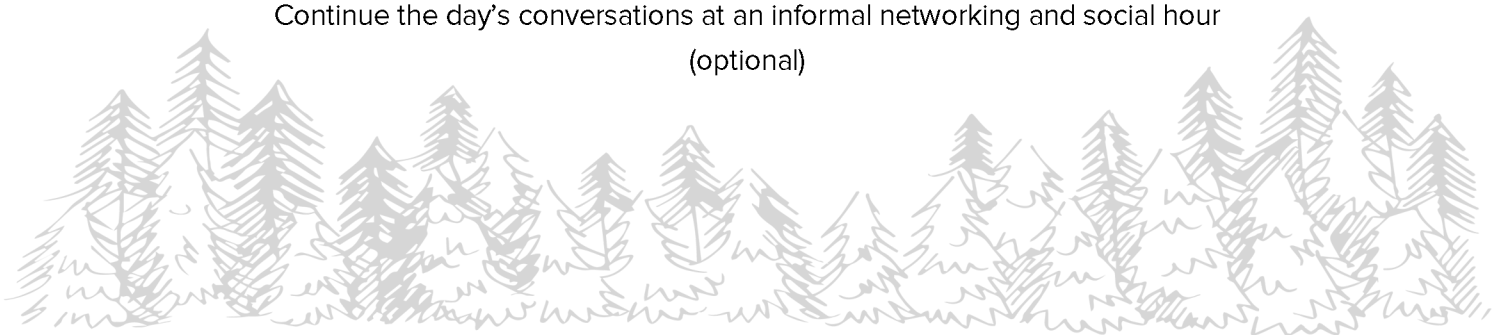
CLOSING REMARKS

4:45 p.m. **Final Notes** — Dr. Adam Heathcote, Director, Department of Water and Climate, Science Museum of Minnesota

FROLIC AND SOCIAL HOUR

Continue the day's conversations at an informal networking and social hour

(optional)



POSTER SESSION

Data Analysis and Monitoring Crew: Integrating UW Students in River Monitoring and Restoration Through the Support of the Freshwater Collaborative of Wisconsin — Natalie Beyerl[1], Robert Boss[1], Elliot Connelly[1], Michael Engstrom[1], Cass Hoffmann[1], Elijah Paik[2], El Popp[1], Emily Rose[1], Elizabeth Schwint[1], Bradley Wait[1] : [1]University of Wisconsin–River Falls, [2]University of Wisconsin–Eau Claire

Effective Control of Buckthorn Using Critical Period Cutting — Cece Chmelik[1], Sam Fox-Johnson[2], Mike Schuster[2] : [1]Hamline University, [2]University of Minnesota

Freshwater Mussels - Public Engagement and Education Resources — Zoe Schroeder[1], Bernard Sietman[1], Isabel Boyce[1], Kathryn Holcomb[1], Jordan Holcomb[1], Zeb Secrist[1], Lindsay Ohlman[1] : [1]Minnesota Department of Natural Resources – Center for Aquatic Mollusk Programs

From the Field to the Lab: Successes and Strategies of the Connecting Opportunities for Research Experiences in the Geosciences (Core) Program — Kelsey Boeff[1], Joy Ramstack Hobbs[1], Robby Callahan Schreiber[2], Thulani Jwacu[3], Zoe Plechaty[1], Evelyn Christian Ronning[4], Lienne Sethna[1] : Science Museum of Minnesota – [1]St. Croix Watershed Research Station, [2]Museum Access & Equity, [3]Kitty Andersen Youth Science Center, [4]Research and Evaluation

Interconnected Agriculture: How Perspective Impacts Sustainable Farming — Spencer Greenberg[1,2,3] : [1]Science Museum of Minnesota, Kitty Andersen Youth Science Center, [2]Science Museum of Minnesota, St. Croix Watershed Research Station, [3]National Science Foundation

Microbial Analysis of Restored Prairie, Prairie Strip, and Crop Soils in Wisconsin — Lizzy Arrowood[1], Kevyn Juneau[1], Natasha Rayne[2], Lathadevi K. Chintapenta[1] : [1]University of Wisconsin–River Falls, [2]University of Wisconsin–Madison

Pollinator Usage of Prairie Strips in Agricultural Production Fields in Western Wisconsin — Chloe King[1], Lathadevi K. Chintapenta[1], Natasha Rayne[2], Kevyn Juneau[1] : [1]University of Wisconsin–River Falls, [2]University of Wisconsin–Madison