

SFS 2018

by Hamdhani Hamdhani

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Society *for* Freshwater Science



Detroit, MI — May 20–24 // Cobo Center

2018 Annual Meeting

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Institute for Great Lakes Research

Complex Issues, Multidisciplinary Approach

Central Michigan University's Institute for Great Lakes Research conducts collaborative research and offers educational opportunities on the ecology of the Great Lakes. Find out more at www.cmich.edu/colleges/se/iglr.

Registration and Check-In Information

Registration and check in for the meeting will be available all week in the Grand Riverview Ballroom A of the Cobo Center. Please check in upon your arrival at the meeting in order to receive your name badge and other important materials and information.

REGISTRATION HOURS

Sunday, May 20—4:00pm to 10:00pm
Monday, May 21—8:00am to 11:00pm
Tuesday, May 22—8:00am to 7:00pm
Wednesday, May 23—8:00am to 4:00pm
Thursday, May 24—8:00am to 5:00pm

MEETING UPDATES

Keep up to date with changes by checking for updates on the bulletin board next to registration, on the guidebook app and on the meeting website.

RECEIPTS AND LETTERS OF PARTICIPATION

Your registration confirmation that was emailed to you when you registered for the meeting will serve as your receipt. In keeping with our conservation efforts, we will not provide printed receipts to attendees on site at the meeting. If you have misplaced your original receipt and need another copy emailed to you, visit the Registration Desk for assistance.

MESSAGES

Message boards will be located near registration. Feel free to post messages, CV's, and job opportunities during the meeting.

IDENTIFICATION

Your conference name badge is required for entry to all sessions, activities and social events and regardless of your age, a valid picture ID is required for service of alcoholic beverages.

WIFI

Connect to *CoboFree* and agree to the terms and conditions.



Jerri Bartholomew, *Ich* (Glass, metal found objects) 2018.
Ichthyophthirius multifiliis is a common parasite of fish, found widely in natural freshwaters. Presenter for Special Session II.



2018—DETROIT, MI

May 20–24 // Cobo Center



About the ¹ Society for Freshwater Science

¹
*SFS is an international scientific organization founded in 1953, whose purpose is to promote further understanding of freshwater ecosystems (rivers, streams, lakes, reservoirs, and estuaries) and ecosystems at the interface between aquatic and terrestrial habitats (wetlands, bogs, fens, riparian forests and grasslands). The society fosters exchange of scientific information among the membership, and with other professional societies, resource managers, policy makers, educators, and the public, sponsoring the journal *Freshwater Science*. Members come from 26 nations worldwide. Society members study the genetics to community structure of freshwater organisms, freshwater ecosystem function, physical processes that affect freshwaters, and linkages between freshwater ecosystems and surrounding landscapes. Applied aspects of their science include habitat and water quality assessment, conservation, fisheries and invasive species management, integrated water resource management, and restoration. Further information can be found at <https://freshwater-science.org/>.*

Navigating Boundaries in Freshwater Science:

In freshwater science and its applications, boundaries and divisions can be paradoxical. On the one hand, freshwater scientists must bridge boundaries in nature (e.g., land-water, ground-water-surface water, lake-stream, freshwater-marine), connect disciplines (e.g., earth-life-social sciences) and cross cultural divides to advance basic understanding, open new lines of investigation, and address humankind's most pressing problems. Moreover, solutions to environmental challenges require improved translation of science and a richer, reciprocal linkage across boundaries between science and society. On the other hand, boundaries are important; absolute integration yields homogenization. Much as decades of research reveal the value of environmental heterogeneity, a more vibrant and relevant freshwater science community requires increased disciplinary and socio-cultural diversity. Our challenge, then, is navigating boundaries and understanding them, not eliminating them. The SFS of the future will be defined by its treatment of such dynamic tensions, as, indeed, seems likely for human societies in general.

Our goal is to focus the SFS community on navigating and understanding boundaries during our 64th annual meeting. In some respects this is an old theme for our society, but it is also one with many important new dimensions appropriate to the place and time of this meeting. Positioned on a river linking lakes and encompassing an international border, the city of Detroit also has its own history of socio-cultural diversity, boundaries, and divisions, providing a rich, heterogeneous geographic and cultural context for our gathering. The meeting's program will emphasize science focused on crossing habitat boundaries and linking disciplines, increase participation and perspectives connecting nations and cultures to address freshwater challenges, and guide us toward a more purposeful relationship between science and society to improve translation of the SFS community's science, education and service into action. In keeping with this theme and unique context, meeting activities will emphasize the sources of inspiration shared by our community, as well as our growing disciplinary and socio-cultural diversity.

For more information visit freshwater-science.org or

sfsAnnualMeeting.org

Meeting Organizers

2018 Program Co-Chairs

Co-Chair: *David Walters*
Co-Chair: *Jeff Wesner*

Additional Members

Scott Tiegs
Laura Craig
Jen Tank
David Costello

President

Colden Baxter

Local Arrangements

Chair: *Donna Kashian*
Steve Francoeur
Eric Benbow
Peter Levi
Darrin Hunt
Al Steinman

Student Resource Committee (SRC) Officers

Chair: *Andrew Sanders*

Board of Directors Representative and Local Meeting Coordinator

Darrin Hunt

Silent Book Auction

Martha Dee

Live Auction

Sophie Higgs

SRC Workshop

Rachel Voight

Student-Mentor Mixer

Courtney Larson

Merchandise

Andrea Fitzgibbon,
Raissa Mendonca,
Sean Nussle

Undergraduate Awards

Anna Vincent, Lisa Kim

Social Media Managers

Katherine O'Reilly, Kara Prior

Education & Diversity

Paul Risteca

Early Career Committee

Co-Chair: *Natalie Griffiths*
Co-Chair: *Meryl Mims*

Zaccharius Compson

Michael Hassett

Ashley Helton

Erin Hotchkiss

Marc Peipoch

PJ Torres

Society Officers & Information

Executive Committee

President: *Colden Baxter*

Vice President: *Amy Marcarelli*

Past-President: *Emily Bernhardt*

President-Elect: *Jennifer Tank*

Vice President-Elect: *Todd Royer*

Treasurer: *Mike Swift*

Secretary: *Sally Entrekin*

FC Chair: *Kim Haag*

PIP Rep: *Ayesha Burdett*

Board of Directors

President: *Colden Baxter*

Past-President: *Emily Bernhardt*

President-Elect: *Jennifer Tank*

Vice President: *Amy Marcarelli*

Past Vice President: *Steve Thomas*

Vice President-Elect: *Todd Royer*

Treasurer: *Mike Swift*

Secretary: *Sally Entrekin*

Academic Rep: *Walter Dodds*

Early Career Rep: *Natalie Griffiths*

Non-Academic Rep: *Stuart Findley*

International Delegate: *Angus Webb*

SRC Representative: *Darrin Hunt*

PC Chair: *Michelle Baker*

FC Chair: *Kim Haag*

Website and Social Media

We encourage you to use the meeting website and the detailed online schedule for all current information and to navigate the meeting.

Meeting Website

<https://sfsannualmeeting.org>

Society Website

<https://freshwater-science.org>

Mobile App/Guidebook

<http://guidebook.com/g/sfs18>

Facebook

<https://facebook.com/FreshwaterScience>

Twitter

<https://twitter.com/benthosnews>
#2018sfs

Conference Planner/Meeting Management

USU Conference Services

Joy Brisighella
435-797-9270
joy.brisighella@usu.edu

Kylie Downs
435-797-0035
kylie.downs@usu.edu

Recording Policy

Please! No recording of individual talks or sessions (oral or poster). Audio taping, videotaping, or photographing of presentations is not allowed at the meeting. Thank you for your cooperation.



SFS Diversity Statement

The Society for Freshwater Science is dedicated to promoting diversity among its members and welcomes and encourages participation from all, regardless of ethnicity, sexual orientation, gender identity, socioeconomic status, physical or mental difference, religion, age, or national origin. The SFS is inclusive and accepting of all people and built on tolerance, respect, and a welcoming spirit at all of our activities. We strive to actively promote diversity across all levels of our society including members, leaders, committees, and staff. We value a diverse community and believe it fosters a richer understanding of freshwater ecosystems and conservation of global freshwater resources. Members with questions, comments or concerns about SFS diversity issues are encouraged to raise them with a member of the SFS Education and Diversity Committee.

This statement was approved by SFS Membership at 2016 SFS Business Meeting

SFS Annual Meeting Code of Conduct

All members registering for the Society for Freshwater Science Annual Meeting must agree to abide by the following Code of Conduct:

1 The Society of Freshwater Science is an international scientific organization whose purpose is to promote further understanding of freshwater ecosystems and ecosystems at the interface between aquatic and terrestrial habitats. SFS members and authors of SFS publications are expected to adhere to the SFS Science-Based Policy and the SFS Statement of Ethics.

SFS meetings, open to SFS members and those interested in freshwater sciences, are among the most respected meetings in the freshwater science community. SFS is committed to providing a safe, productive and welcoming environment for all meeting participants and staff. All participants including, but not limited to, attendees, speakers, volunteers, exhibitors, SFS staff, service providers and others are expected to abide by this SFS Meetings Code of Conduct. This Code of Conduct applies to all SFS meeting-related events including those sponsored by organizations other than SFS but held in conjunction with SFS events, in public or private facilities.

Expected Behavior

- Communicate openly with respect and consideration for others, valuing a diversity of views and opinions.
- Avoid personal attacks directed toward other attendees, participants, SFS staff and suppliers/vendors.
- Be mindful of your surroundings and of your fellow participants. Alert SFS staff if you notice a dangerous situation or someone in distress.
- Respect the rules and policies of the meeting venue, hotels, SFS contracted facility, or any other venue.

- Request permission from speakers before recording or taking photographs during their presentation. Turn off any ringers or otherwise disrupting devices during oral or poster sessions.
- All members should feel empowered to speak up or intervene if they observe discriminatory behavior directed at others

Unacceptable Behavior

It is important that our meeting be a place where no attendee or staff is ever belittled, criticized or made to feel unsafe. The following behavior will not be tolerated:

- Harassment, intimidation or discrimination in any form.
- Physical, written, or verbal abuse of any attendee, speaker, volunteer, exhibitor, SFS staff member, service provider or other meeting guest.
- Examples of unacceptable behavior include, but are not limited to, verbal comments related to gender, sexual orientation, disability, physical appearance, body size, race, religion, national origin, inappropriate use of nudity and/or sexual images in public spaces or in presentations, threatening or stalking any attendee, speaker, volunteer, exhibitor, SFS staff member, service provider or other meeting guest.

Reporting Unacceptable Behavior & Consequences

- All attendees and staff are expected to abide by the SFS code of ethics.
- Anyone experiencing or witnessing behavior that constitutes an immediate or serious threat to public safety is advised to contact 911 and locate a house phone and ask for security.
- Anyone requested to stop unacceptable behavior is expected to comply immediately.
- If you are the subject of unacceptable behavior or have witnessed any such behavior, please immediately notify the SFS Executive Director (Andy Leidolf), any SFS officer, or our conference services representative (Joy Brisighella).
- Notification can also occur by emailing your concern to the SFS Executive Director or our conference services representative (exec.director@freshwater-science.org or joy.brisighella@usu.edu, respectively).
- After receiving a report of inappropriate behavior, our conference services representative will assess the report and work with the complainant to determine the most appropriate response. SFS is committed to protecting the privacy of all individuals involved in the incident to the greatest extent possible. When necessary, the SFS leadership will be notified that a complaint has been received so it can consider appropriate actions.
- The SFS leadership reserves the right to take any lawful action we deem necessary in response to a violation of this code. This includes, but is not limited to, the immediate removal from the meeting without warning or refund.

Ensuring Inclusion & Diversity in the Future

The SFS leadership and the SFS Education and Diversity Committee also encourage anyone to contact SFS officers or members of the SFS Education and Diversity Committee <https://freshwater-science.org/my-sfs/diversity-inclusivity> regarding ways in which the society can improve inclusion & diversity and encourage both a stimulating and supporting atmosphere.

Version 2. Approved by SFS Board of Directors 11 April 2018

Version 1. (Including text through Unacceptable Behavior) approved by SFS Board of Directors 14 Dec 2016

Wednesday – Early Morning Oral

MAY 23, 2018

	310A	310B	320	321	330A
SESSION	C08 Urban Ecology <i>Moderator: Carla Lee Atkinson</i>	S25 Effects of Multi-stressors in Stream Ecology Across Regional Landscapes and Mesocosm Studies <i>Moderator: Ian Waite</i>	C02 Fish and Other Aquatic Vertebrates <i>Moderator: Keith Gido</i>	S30 Environmental and Ecological Roles of Dissolved Organic Matter in Freshwater Ecosystem <i>Moderator: Helong Jiang</i>	S07 Landscape Influences on Freshwater Habitats and Biological Assemblages <i>Moderator: Lizhu Wang</i>
9:00 AM - 9:15 AM	AQUATIC MACRO-INVERTEBRATES AS BIOINDICATORS OF WATER QUALITY IN RURAL AND URBAN STREAMS AFFECTED BY CHANNELIZATION. Orengo Sanchez, Ismael	BENTHIC MICROBIAL COMMUNITIES AS INDICATORS OF ECOLOGICAL DISRUPTION BY PHARMACEUTICALS AND PERSONAL CARE PRODUCTS Kelly, John; Rosl, Emma	PLETHODONTID STREAM SALAMANDER OCCUPANCY, ABUNDANCE, AND DIET ALONG A CONDUCTIVITY GRADIENT Hutton, Jacob	BIOAVAILABILITY OF DISSOLVED ORGANIC MATTER IN A CYANOBACTERIAL BLOOMING LAKE AND IMPACTS ON EMERGING CONTAMINANT BEHAVIOUR Jiang, Helong; Bai, Lellei	LANDSCAPE AND REACH SCALE INFLUENCES ON RESIDENT CUTTHROAT TROUT AND DOLLY VARDEN POPULATIONS IN SOUTHEAST ALASKA Steel, E. Ashley; Jacobson, Shella; Tucker, Emil; Bryant, M. Buck; McDonnell, John
9:15 AM - 9:30 AM	DYNAMICS OF WATER QUALITY IN AN EFFLUENT-DOMINATED REACH OF THE SANTA CRUZ RIVER, AZ Hamdhani, Hamdhani; Eppehimer, Drew; Bogan, Michael	IDENTIFYING THE JOINT EFFECTS OF FLOW VARIABILITY AND URBAN WASTEWATER ON MACROINVERTEBRATE COMMUNITIES: A TAXONOMIC AND FUNCTIONAL APPROACH Mor, Jordi-René; Dolédec, Sylvain; Pereda, Olatz; Acuña, Vicens; Elosegi, Arturo; Mandaric, Ladislav; Sabater, Sergi; Muñoz, Isabel	QUANTIFYING SEASONAL HOME RANGES OF CAPTIVE-REARED, RECENTLY-RELEASED JUVENILE BLANDING'S TURTLES (EMYDOIDEA BLANDINGII) Cann, Armand; Muñoz, Andrés; Harden, Leigh Anne; Milanovich, Joseph	EXPLORING SPATIO-TEMPORAL VARIATION IN STREAM DISSOLVED ORGANIC MATTER TO BETTER UNDERSTAND HYDROECOLOGICAL REGIMES IN A MONTANE, URBANIZING WATERSHED D'Andrilli, Juliana; Storb, Mery; Payn, Robert	ENVIRONMENTAL AND BIOLOGICAL IMPACTS TO CRAYFISH POPULATIONS IN IMPOUNDED AND UNIMPOUNDED STREAMS IN ALABAMA Barnett, Zanethia; Adams, Susan; Ochs, Clifford
9:30 AM - 9:45 AM	CHARACTERIZING THE QUALITY OF GOLF COURSE LENTIC ECOSYSTEMS Milanoivich, Joseph; Picacento, Jennifer; Muñoz, Andrés; Lentini, Isabella; Cann, Armand; Berg, Martin B.	NUTRIENT ADDITIONS MODIFY EFFECTS OF TEMPERATURE ON PRIMARY PRODUCER COMMUNITIES WITH IMPLICATIONS FOR ENERGY AND NUTRIENT FLUX THROUGH FOOD WEBS Henderson, Kate; Cross, Wyatt; Benstead, Jonathan; Gislason, Gisli Mar; Hood, James; Hurn, Alexander D; Olafsson, Jon S; Welter, Jill	RESPONSE OF ARID RIVER FISHES TO CLIMATE, HYDROLOGY AND WILDFIRE Gido, Keith; Propst, David; Whitney, James; Hedden, Skyler; Turner, Thomas; Pilger, Tyler	CONCENTRATION AND COMPOSITION OF DISSOLVED ORGANIC MATTER IN TEMPORARY DEPRESSIONAL WETLANDS ON THE DELMARVA PENINSULA VARY BETWEEN WETLANDS AND SEASONS Armstrong, Alec; Palmer, Margaret; Gonsior, Michael	LANDSCAPE APPROACHES TO UNDERSTANDING INVASIONS IN INLAND LAKES Alofs, Karen
9:45 AM - 10:00 AM	RESTORING AQUATIC ECOSYSTEMS IN ARID ENVIRONMENTS WITH TREATED WASTEWATER: WISHFUL THINKING OR PRACTICAL REALITY? Eppehimer, Drew; Hamdhani, Hamdhani; Bogan, Michael	A COMPARISON OF ALGAE, INVERTEBRATE AND FISH MULTI-STRESSOR MODELS ACROSS MULTIPLE DISTURBANCE GRADIENTS Waite, Ian; Munn, Mark; Meador, Mike; VanMetre, Pete; Moran, Patrick; Nowell, Lisa	A LOW-WATER CROSSING IMPACTS LONGITUDINAL MOVEMENTS OF KNOBFIN SCULPIN (<i>COTTUS IMMACULATUS</i>) AND NORTHERN HOG SUCKER (<i>HYPENTELIUM NIGRICANS</i>) IN AN OZARK RIVER Williams, Jeff; Dodd, Hope; Finn, Debra	ACTIVE TRANSFORMATION OF NATURAL DISSOLVED ORGANIC MATTER REGULATED BY SIZE AND COMPOSITION Xu, Huacheng; Guo, Laodong	RELATIONSHIPS BETWEEN FOREST COVER AND FISH DIVERSITY IN THE AMAZON RIVER Arantes, Caroline; Winemiller, Kirk; Petrere, Miguel; Castello, Leandro; Hess, Laura; Freitas, Carlos
10:00 AM - 10:15 AM	ELECTRIC FIELDS: WHAT ARE THEY BAD FOR? Miliša, Marko; Djikić, Domagoj; Mandić, Tvrtko; Ivković, Marija	BIODIVERSITY RESPONSES TO MULTIPLE STRESSORS IN THREE EUROPEAN BASINS: BACTERIA, ALGAE, MACROPHYTES, INVERTEBRATES AND FISH Muñoz, Isabel; De Castro-Catala, Nuria; Bellin, Alberto; Borrego, Carles; Kalogianni, Eleni; Paunovic, Momir; Sabater, Sergi	HOW DO SMALL BARRIERS AND STREAM FLOW INTERACT TO STRUCTURE PARTIALLY MIGRATORY FISH POPULATIONS? Kelson, Suzanne; Miller, Michael; Carlson, Stephanie	THE FATE OF TERRESTRIALLY DERIVED DISSOLVED ORGANIC MATTER IN ONE SUB-TROPICAL AND THREE TEMPERATE LAKES OF VARYING TROPHIC STATUS Dempsey, Chris; Brentrup, Jennifer; Magyan, Sarah; Knoll, Lesley; Williamson, Craig	ASSESSING THE HISTORICAL DISTRIBUTION OF PODOSTEMUM CERATOPHYLLUM MICHX., A FOUNDATION SPECIES OF EASTERN NORTH AMERICA RIVERS Wood, James; Davis, Des- tinee; Beaumont, Edward; Canfield, Sam
10:15 AM - 10:30 AM	NUTRIENT DYNAMICS IN SEMIARID CONSTRUCTED STREAMWATER WETLANDS Macek, Carolyn; Hale, Rebecca; Baxter, Colden; Burnham, Morey	DIRECT AND INDIRECT EFFECTS OF MULTIPLE STRESSORS ON STREAM FAUNA ACROSS WATERSHED, REACH AND SITE SCALES. Villeneuve, Bertrand; Piffady, Jeremy; Valette, Laurent; Souchon, Yves; Usseglio-Polatera, Philippe	THE IMPORTANCE OF FIELD ASSESSMENTS IN MODELING FISH PASSAGE OF BARRIERS IN GREAT LAKES TRIBUTARIES Rodstrom, John; Milt, Austin; Moody, Allison; Diebel, Matt; Hamann, Ellen; McIntyre, Peter B.		

GORDON-WEAVER, Aaron	C01 Algae, S21 Navigating Between Ecosystem Structure and Functioning in Research and Management, P235
GOSSIAUX, Alice	C20 Climate Change, S04 Expanding regulatory frameworks to include detrital responses in streams
GOSSIAUX, Duane	S08 Re-eutrophication of Lake Erie: Causes, Consequences, and Possible Solutions
GOTTSCALK DRUSCHKE, Caroline	S14 Crossing Brook Trout Boundaries: Interdisciplinary Approaches to Salvelinus Fontinalis Research, Management, and Outreach
GOVEDICH, Fredric	C03 Invertebrates, P38
GOVEKAR, Lauren	C03 Invertebrates, C11 Community Ecology
GOWLER, Camden	C18 Biodiversity
GRACE, Michael	C10 Biogeochemistry, S25 Effects of Multi-stressors in Stream Ecology Across Regional Landscapes and Mesocosm Studies
GRAHAM, Cassie	C12 Conservation Ecology
GRAHAM, Gillian	C08 Urban Ecology
GRANTHAM, Ted	C14 Hydroecology, C20 Climate Change, S22 Transcending Aquatic-terrestrial Boundaries: Ecology, Conservation and Management of Temporary Freshwaters, P236, P238
GRAY, Michelle	S09 Spatial aspects of freshwater ecology: understanding, managing, predicting
GREEN, Sarah	S15 Crossing Boundaries: Watershed-tributary-lake Exchanges in the Great Lakes Region
GREENFIELD, Paul	S18 Aquatic Biodiversity Surveillance Using Environmental Genomics
GREGORY, Andrew	S20 Emerging Approaches to Modeling Population and Community Dynamics in Fresh Waters
GREGORY, Angela	C14 Hydroecology
GRIFFITH, Michael	C13 Ecotoxicology
GRIFFITHS, Natalie	C10 Biogeochemistry, C31 Organic Matter Processing, C16 Restoration Ecology
GRIMM, Amanda	S19 Aquatic Invasive Species in the Laurentian Great Lakes Region
GRIMM, Nancy	C08 Urban Ecology, S22 Transcending Aquatic-terrestrial Boundaries: Ecology, Conservation and Management of Temporary Freshwaters, C10 Biogeochemistry, P92, C22 Disturbance, C31 Organic Matter Processing
GRIMSTEAD, Jeremy P.	S07 Landscape Influences on Freshwater Habitats and Biological Assemblages
GROVE, Michael	C11 Community Ecology, P108
GRUDZINSKI, Bartosz	C16 Restoration Ecology, C27 Landuse and Non-Point Source Impacts
GRUENEIS, Nikolas	C26 Invasive Species
GRUETZMACHER, Alan	C31 Organic Matter Processing
GUASCH, Helena	S16 Ecological Stoichiometry as a Bridge Across Disciplinary Boundaries in Freshwater Science
GUÉROLD, François	C20 Climate Change, S04 Expanding regulatory frameworks to include detrital responses in streams
GUFU, Guyo	C26 Invasive Species
GUINNIP, James	C10 Biogeochemistry
GULIS, Vlad	S04 Expanding Regulatory Frameworks to Include Detrital Responses in Streams, C31 Organic Matter Processing
GULLO, Catherine	C03 Invertebrates
GUO, Laodong	S30 Environmental and Ecological Roles of Dissolved Organic Matter in Freshwater Ecosystem
GUO, Tian	S08 Re-eutrophication of Lake Erie: Causes, Consequences, and Possible Solutions
GURDZIEL, Katherine	C08 Urban Ecology, C25 Food Webs
GURNEY, Kirsty	C09 Wetland Ecology
GUSTAFSON, Greg	C28 Land-Water Interfaces
GUTIERREZ, Pablo	C22 Disturbance, C25 Food Webs, C22 Disturbance

GUTIERREZ, Carolina	S21 Navigating Between Ecosystem Structure and Functioning in Research and Management
GUTIÉRREZ-CÁNO-VAS, Cayetano	S22 Transcending Aquatic-terrestrial Boundaries: Ecology, Conservation and Management of Temporary Freshwaters S22 Transcending Aquatic-terrestrial Boundaries: Ecology, Conservation and Management of Temporary Freshwaters
GUTIÉRREZ-FONSECA, Pablo E.	C22 Disturbance
GUY, Christopher	C06 Large River Ecology
GU_BERGSSON, Gu_ni	S12 Status and Trends in Arctic Freshwater Biodiversity Across the Circumpolar Region
HABAN, Desiree'	C11 Community Ecology
HACKMAN, Alex	S09 Spatial aspects of freshwater ecology: understanding, managing, predicting
HAINES, Emma	S22 Transcending Aquatic-terrestrial Boundaries: Ecology, Conservation and Management of Temporary Freshwaters
HAJIBABAEI, Mehrdad	C14 Hydroecology, S04 Expanding Regulatory Frameworks to Include Detrital Responses in Streams, S18 Aquatic Biodiversity Surveillance Using Environmental Genomics, S21 Navigating Between Ecosystem Structure and Functioning in Research and Management
HALABISKY, Meghan	S20 Emerging Approaches to Modeling Population and Community Dynamics in Fresh Waters
HALANYCH, Kenneth	C15 Population Ecology
HALE, Rebecca	C08 Urban Ecology, C10 Biogeochemistry, S28 Reframing the Science of Urbanized Headwater Streams
HALL, Ed	S18 Aquatic Biodiversity Surveillance Using Environmental Genomics
HALL, Robert	C10 Biogeochemistry, C14 Hydroecology, S27 Green Meets Brown: Ecological Significance of Interacting Autotrophy and Heterotrophy in Freshwaters,
HALL, Spencer	C18 Biodiversity
HALL, Steven	S28 Reframing the Science of Urbanized Headwater Streams
HALVORSON, Halvor	S04 Expanding Regulatory Frameworks to Include Detrital Responses in Streams, S27 Green Meets Brown: Ecological Significance of Interacting Autotrophy and Heterotrophy in Freshwaters, S16 Ecological Stoichiometry as a Bridge Across Disciplinary Boundaries in Freshwater Science S27 Green Meets Brown: Ecological Significance of Interacting Autotrophy and Heterotrophy in Freshwaters, P252
HAMANN, Ellen	C02 Fish and Other Aquatic Vertebrates
HAMASHIMA, Tsubasa	C02 Fish and Other Aquatic Vertebrates
HAMDHANI, Hamdhani	C08 Urban Ecology
HAMILTON, Stephen	C10 Biogeochemistry, C24 Eutrophication, S05 Damming the Amazon - Hydropower Proliferation in the World's Largest River System,
HAMPEL, Justyna J.	S08 Re-eutrophication of Lake Erie: Causes, Consequences, and Possible Solutions
HAMPTON, Tyler	C14 Hydroecology, C10 Biogeochemistry C10 Biogeochemistry, P84
HANDLER, Amalia	S22 Transcending Aquatic-terrestrial Boundaries: Ecology, Conservation and Management of Temporary Freshwaters
HANEY, Austin	C05 Unionid Ecology, C20 Climate Change,
HANNA, Dalal	S06 Social-Ecological Freshwater Systems and Ecosystem Services
HANNAH, David	C14 Hydroecology, S01 Dams, Big Data, and Meta-analyses
HANNAPPEL, Madeline	C13 Ecotoxicology
HANRAHAN, Brittany	S08 Re-eutrophication of Lake Erie: Causes, Consequences, and Possible Solutions



Translational Ecology in Freshwater Science

Freshwater resources critically support ecosystem and human health. Future projections include widespread scarcity in some areas, and excess in others. Human impacts on freshwater influence both quantity (e.g., dams, groundwater withdrawal) and quality (e.g., land use change, contaminant delivery). Climate change exacerbates these influences by altering temperatures, land cover, precipitation and runoff patterns, and the abundance, distribution, and diversity of aquatic organisms.

In the face of continuing environmental change and the magnitude of its complex and interacting effects on global freshwater, **Translational Ecology (TE)** provides a potential roadmap for freshwater science to inform real world decision-making. The foundational principles of TE include interdisciplinary **collaboration**, multi-directional **engagement**, long-term **commitment**, iterative **communication**, transparent and representative **process**, and a **decision context** that leads to actionable outcomes. Freshwater science is ideally suited for TE, and while we may have called it by other names, our community has a track record of providing some of the most compelling examples of TE success.

At SFS 2019, we hope you'll share experiences, opportunities, and outcomes from translational ecology in freshwater science. Embracing the TE approach is challenging, it's not for everyone, and not all efforts are successful. But what can we learn when TE works? Moreover, what are the benefits for training the next generation of scientists? Often the translation of freshwater research happens post hoc; we'll explore how outcomes can change when TE is part of the research design process, and partnerships are made early in the research lifecycle.

Special sessions at SFS 2019 will highlight examples of novel interdisciplinary engagement, uses of the iterative process of research co-production, and the challenges and benefits of user-inspired, translational research, bridging gaps between management and policy. With freshwater as our touchstone, we hope that SFS 2019 will foster a conversation that will inform decision-making at the nexus of freshwater and environmental change that can help sustain the freshwater ecosystems of our future. See you in Salt Lake City!

About the 2019 Meeting Logo

Scientist and Artist **Vanessa Verstraete** designed our 2019 Meeting Logo. Since finishing her BS in Biology from Wayne State University, she is exploring advanced studies in scientific illustration, a perfect fit for someone who has equal passion for the sciences and the arts. She hopes to pursue a career as a freelance illustrator for scientists and medical professionals around the world. The 2019 logo was inspired by the interdisciplinary nature of freshwater science. Vanessa wanted to emphasize this in a simple way, while incorporating elements that represent our 2019 setting in Salt Lake City, Utah. Her design includes a Quaking Aspen (*Populus tremuloides*) leaf, which is the Utah State Tree, and her dragonfly was inspired by the western Flame Skimmer (*Libellula saturata*). Each major element—the water droplet, leaf, and dragonfly—represent different focus areas of freshwater science, and the overlap symbolizes their critical interaction.

2019 Annual Meeting Schedule

Sunday May 19, 2019:
Workshops and
Board/Committee Meetings
Welcome Mixer/Awards

**Monday, May 20 —
Thursday, May 23:**
SFS Annual Meeting
Contributed and Special
Sessions, Mixers,
Special Events

CONFERENCE VENUE:
Salt Palace Convention Center
100 South West Temple
Salt Lake City, UT 84101

CONFERENCE HOTELS:
Hotel RL Salt Lake
161 W. 600 S.
Salt Lake City, UT 84101

Salt Lake Plaza Hotel
Temple Square
122 W. South Temple
Salt Lake City, UT 84101

Hilton Salt Lake City Center
255 S. West Temple
Salt Lake City, UT 84101

Radisson Hotel
Salt Lake City Downtown
215 W. South Temple
Salt Lake City, UT 84101



Interested in helping to create a great SFS 2019? Be part of the Program Committee by contacting sfsmembership@usu.edu or reach out to Jennifer Tank and Todd Royer (incoming President and Vice President) here at the meeting. For more information, visit the society's NEW website at freshwater-science.org or sfsAnnualMeeting.org

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