



THE CONFLUENCE

Newsletter of the Washington–British Columbia Chapter of the American Fisheries Society

Winter 2017/2018

Inside this Issue

President's Report	2
WA-BC AGM Preview	3
Jeff Cederholm Scholarship	7
Membership Heat Map	8
Member Recognized by AFS	7
Education Corner	10
Chapter Information	13

Read about upcoming deadlines and what's shaping up for the 2018 WA-BC Annual General Membership Meeting, "40 Years of Fish and Fisheries in the Pacific Northwest," in this meeting preview edition of *The Confluence*. **Abstract** submission and **early-bird registration close February 15, 2018** for our meeting in Kelowna, BC on March 19–22, 2018.



Summertime view of Kelowna, BC. You can expect a few less green trees in March, but there will still be beautiful scenery and great activities in the area, like our wine tour (<https://wa-bc.fisheries.org/next-meeting/special-events/>).

2018 AGM in Kelowna, British Columbia on March 19–22

More details about the meeting can be found at: <https://wa-bc.fisheries.org/next-meeting/>

President's Report

WA-BC Chapter Executive Committee



President

Tamara Knudson

President Elect

Gabriel Temple

Vice President

Brittany Jenewein

Past President

Alix Blake

Treasurer

Ryan Klett

Secretary

Kirsten Gale

Communications Director

Benjamin Cross

Student Representative

Orlay Johnson

AFS-UW President

Grace Workman

AFS-BC President

Sam Wilson

AFS-EWU President

Shawna Warehime

Greetings!

Spring is in the air and the Executive Committee is gearing up to celebrate the 40th Anniversary of the WA-BC Chapter! We invite you to join us at our Annual General Meeting which will be held at the Coast Capri Hotel in downtown Kelowna, British Columbia March 19-22, 2018. I encourage you to finalize all your travel plans before the abstract submission and early bird registration deadline, **February 15**. I hope you will join us for this great event. Please visit the Chapter website for specific meeting information including abstract submission, registration, sponsorship, tradeshow participation, accommodations with our discounted rate (only until February 25), R workshop, spawning run, and other special events (<https://wa-bc.fisheries.org/next-meeting>). The website is being updated regularly as plans are finalized, so keep checking for new information.

We are still seeking donations for our silent auction. Items, such as field supplies and equipment, books, t-shirts, art, and other cool fisheries swag are welcome! If you are interested in donating to our silent auction, please contact me directly at tamarak@spokanetribe.com. Proceeds from the silent auction directly supports student attendance at our conferences through student travel awards.

We are also seeking nominations for 2018 Chapter awards. Award categories can be found at <https://wa-bc.fisheries.org/about-us/awards>. Recipients will be honored at 2018 annual general meeting in Kelowna. Nominations require a candidate's name, contact information, some biographical information and their connection to the WA-BC chapter including service to AFS. Submit your nomination(s) to Past-President Alix Silver at alix.blake@spokanetribe.com or Chapter President Tamara Knudson at tamarak@spokanetribe.com by **March 1, 2018**. Please nominate individuals or organizations that you feel deserve these awards!

If you have served on the Chapter Executive Committee, we would like to hear from you. Our archive committee, chaired by Vice President Brittany Jenewein, could use your help in compiling historical Chapter information and records. Please contact us at afs.wabc@gmail.com or tamarak@spokanetribe.com.

Western Division News: The Alaska Chapter will host the 2018 Western Division meeting May 21-25, 2018 in Anchorage, Alaska. The meeting theme is "Change, Challenge, and Opportunity in Fisheries: Fishing for Solutions". For more information on the Western Division meeting, visit <http://wdmtg.fisheries.org>.

I hope to see you in Kelowna.

Tamara Knudson,
WA-BC Chapter President

Contact for President Tamara Knudson

Email: tamarak@spokanetribe.com or afs.wabc@gmail.com

2018 WA-BC Annual General Meeting Preview

Coast Capri Hotel, Kelwona, BC

March 19–22, 2018

Deadlines

- **Early-bird registration** closes **February 15**, register at wa-bc.fisheries.org/next-meeting/registration/
- **Abstract submissions** are due **February 15**, submit abstracts at wa-bc.fisheries.org/next-meeting/abstract-submission/.
- **Student scholarship** application period closes **February 16**. C. Jeff Cederholm Scholarship application information on page 7 (wa-bc.fisheries.org/about-us/awards/).
- **Book your hotel** room before they fill-up; room block closes **February 25**. Hotel booking information at wa-bc.fisheries.org/next-meeting/venue-accommodations/.
- **Chapter award nominations** are due **March 1**. Application information at wa-bc.fisheries.org/about-us/awards/.

Schedule Highlights

Monday, March 19

- **Beginner R Course**, 1:30–4:30 pm



A \$20 workshop meant to introduce new comers to the world of R, no prior experience with R is necessary! By the end of this workshop attendees will be able to set up a simple datasheet for statistical tests. The goal of this workshop is to give a leg up in the steep learning curve in R, and teach newcomers in R how to troubleshoot common problems. Details at: wa-bc.fisheries.org/next-meeting/continuing-education/

- **Wine Tour**, 12:00–5:00 pm

Interested in checking out the great local wineries? Join us for an all-inclusive tour of four Kelowna wineries for a guaranteed good time with your wine and fish-loving friends. Cost is \$95 (USD). Details at: wa-bc.fisheries.org/next-meeting/special-events/

- **Welcome Social**, 6:00–8:00 pm

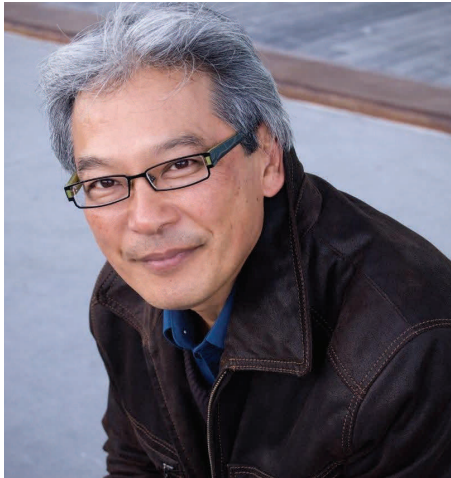


Continued on Page 4

2018 WA-BC Annual General Meeting Preview

Tuesday, March 20

- **Welcome and Plenary Session, 8:00–11:00 am**
- * **Plenary Speakers**



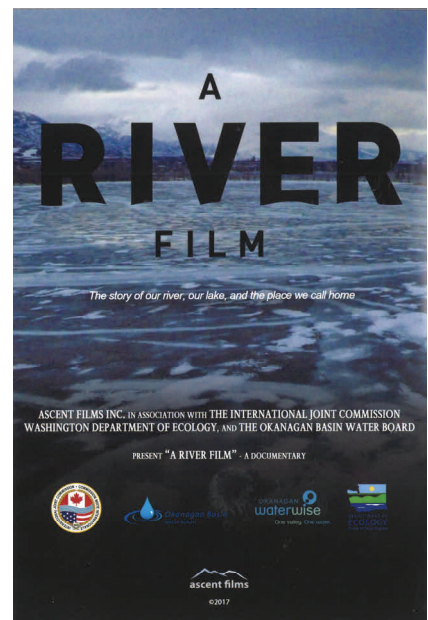
Paul Kariya, Senior Policy Advisor, Coastal First Nations, Vancouver, BC



Jordan Coble, Cultural and Operations Administrator, Westbank First Nation Sncəwips Heritage Museum

- * **Presentation of "A River Film,"** a story about people, and how they have, over many years, constructed a relationship with a river to support the needs and aspirations of many users, while working to maintain the environment that supports those differing priorities. Introduced by **Brian Symonds** of the International Osoyoos Lake Board of Control.

- **Spawning Run, 11:00 am – 12:30 pm**
- **Concurrent Sessions, 1:20–5:00 pm**
- **Student/Mentor Panel & Mixer, 5:00–6:00 pm**
Join Fisheries Professionals in a panel discussion of career paths and opportunities following graduation, followed by a chance to mingle informally.
- **Trade Show Social & Poster Session, 6:00–8:00 pm**
Enjoy learning about the latest research, management, and technology while perusing through the Poster Session and the exhibitor tables at the Trade Show.



Continued on Page 5

2018 WA-BC Annual General Meeting Preview

Wednesday, March 21

- **Concurrent Sessions**, 9:00 am – 12:00 pm
- **Chapter Business Meeting, Lunch Buffet**, 12:00–1:20 pm
- **Concurrent Sessions**, 1:20–5:00 pm
- **Silent Auction**, 5:30–7:30 pm

Each AGM we host a Silent Auction to raise funds for our Student Travel Awards. We always have an excellent selection of items to bid on, thanks to our generous donors and the students who organize the auction. If you would like to donate an item to the silent auction, please contact us at afs.wabc@gmail.com. We can arrange for items to be shipped in both Canada and the USA.



- **Banquet and Entertainment**, 6:00–9:00 pm



Enjoy a delicious banquet while we announce the recipients of this year's WA-BC Chapter Awards . We are thrilled to have **Ptriodactyl** performing throughout the night. Ptriodactyl is a unique fusion of groove and space. With their effervescent synergy, musical interplay, and sense of humour, Ptriodactyl captivates audiences. This electrifying trio includes Jessica Heaven (vocals), Gavia Lertzman-Lepofsky (violin, she's a WA-BC AFS member!!!), and Jake McIntyre-Paul (bass).

If you have served on the WA-BC Chapter Executive Committee, please get in touch with us (afs.wabc@gmail.com)! We're hoping to reunite folks at our banquet to share stories of successes, failures, and collectively dream big for the future of the Chapter.

Thursday, March 22

- **Concurrent Sessions**, 9:00 am – 12:00 pm

Shop Amazon Smile, Percentage Donated to WA-BC AFS

The WA-BC Chapter is now linked up with Amazon! If you love to shop on Amazon, please listen up! Through the AmazonSmile program, 0.5% of all your eligible purchases made through the AmazonSmile link will be donated directly to the WA-BC



Chapter! This can add up quickly and help our Chapter tremendously! Here's how it works. Just paste this link into your browser and enter AmazonSmile before you shop! <https://smile.amazon.com/ch/61-1534241>.

2018 AFS International Fisheries Section Fellow Award

Attention Students and Young Professionals: The International Fisheries Section (IFS) of the American Fisheries Society (AFS) is excited to announce the 2018 International Fisheries Section Fellow Award. The Fellow will represent IFS/AFS by presenting a poster or oral presentation at the 2018 Fisheries Society of the British Isles (FSBI) Annual Symposium, July 9-13, at the University of East Anglia, in Norwich, United Kingdom. The theme of the 2018 FSBI Annual Symposium is "The Sustainable Use and Exploitation of Fishes," www.fsbi.org.uk/conference-2018/symposium-theme-2/. Additionally, the award recipient will receive up to \$2,100 (USD) of reimbursable travel expenses associated with attending the FSBI Annual Symposium and 1 year of membership to FSBI. This award is open to all Student Members and Young Professional Members (within 2 years of graduation) of AFS. Current AFS membership is mandatory to receive this award.

To apply, please submit the following information as a single PDF document to the Committee Chair for the IFS Fellow Program, Charlie Waters (cwaters8@uw.edu), and the Deputy Committee Chair, Jane Sullivan (jane.sullivan1@alaska.gov) by 11:59pm (PST) on **March 6, 2018**:

- Letter of interest (please include information about your involvement in AFS and how you will benefit from attending the FSBI Annual Symposium)
- Proposed FSBI presentation title and abstract
- Concise resume
- Proposed travel budget (i.e. airfare, ground transportation, etc.); please specify availability of supporting funds you may have from other sources if budget exceeds allowance

The awarded Fellow is expected to fulfill the following obligations: Attend the 2018 FSBI Annual Symposium and present an oral or poster presentation, submit to the Committee Chair a travel report and photographs for print publication by August 12, 2018, submit travel receipts to the Committee Chair by August 12, 2018 for expense reimbursement, attend the AFS annual meeting and IFS committee meeting in Atlantic City, NJ, USA, August 19-23, 2018, act as a site host at the Atlantic City AFS meeting for the FSBI Fellow, and serve as the Deputy Committee Chair of the IFS Fellow Award in 2019 and the Committee Chair in 2020.



C. Jeff Cederholm Scholarship Endowment Fund

Endowment Brief History

Jeff Cederholm dedicated his career to conservation of salmon and aquatic species and their habitats. Jeff passed away in 2006 leaving a legacy of education, pioneering contributions to scientific literature and periodicals and instilling of passion for wild salmon conservation in many people for decades. After a successful American Fisheries Society Meeting hosted by the WA-BC Chapter in Seattle 2011, the Chapter resolved in 2013 to apply raised funds and subsequent contributions to the endowment to create a permanent source of financial support for educational expenses. The Scholarship is administered by the WA-BC Chapter Endowment Committee.



The Scholarship

The scholarship endowment fund will provide **three \$1000 scholarships in 2018**, one each to an **undergraduate** student (pursuing a bachelor's or associate's degree), a student pursuing a **master's degree**, and a student pursuing a **doctorate**.

The following scholarship criteria apply:

Scholarships are intended for defrayment of educational expenses such as tuition, student fees, lab fees, books, supplies, room and board.

Scholarships will be awarded to students pursuing degrees in fisheries, aquatic sciences, or related fields at an accredited college or university.

Master's and PhD applicants must be Washington-British Columbia Chapter members at the time that their application is submitted.

Undergraduate applicants need not be Chapter members.

Deadline February 15!!! - How to Apply

Provide a brief cover letter addressed to the C. Jeff Cederholm Scholarship Committee, fill out the attached application form, acquire two letters of recommendation and e-mail a merged pdf electronic version containing all elements to WA-BC AFS past president, Alix Silver (Blake), alix.blake@spokanetribe.com or mail to WA-BC chapter American Fisheries Society, P.O. Box 9322, Spokane, WA 99209. E-mail submissions are preferred.

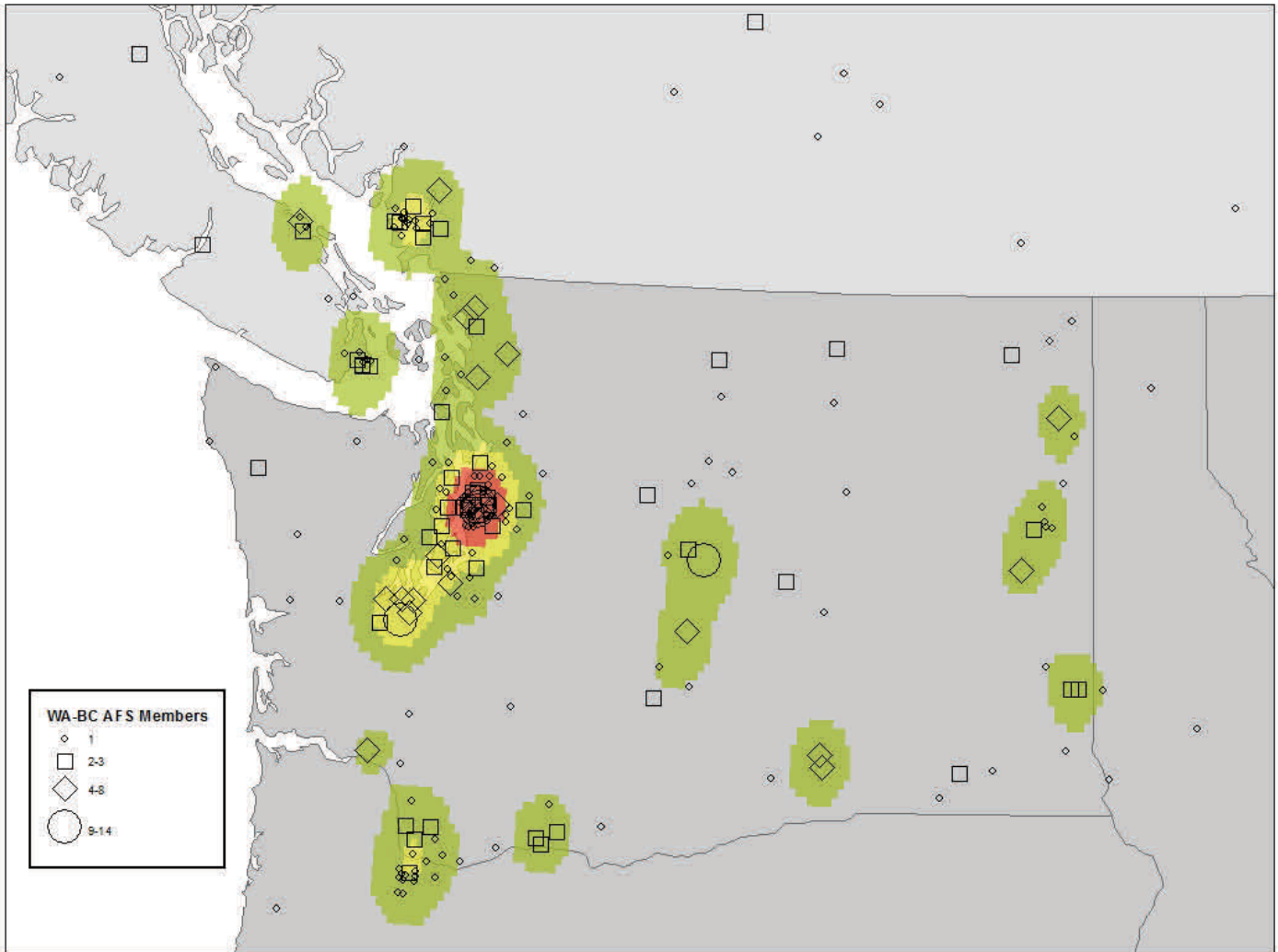


The author, Ryan Klett, looking for WA-BC members on the Okanogan River

Where's WA-BC Membership Hot

by Ryan Klett

At the end of 2017, there were 503 WA-BC Chapter members. Of these, 369 call Washington State home and 77 reside in British Columbia. Perhaps not surprisingly, major population centers and universities appear to drive the relative density (color-ramp) and distribution (shapes, by postal code) of our membership. Can you find yourself? The remaining 57 members, led by a strong showing from Oregon (17 members, Thanks Portland!), hail from a diversity of locations (not pictured) throughout the USA and Canada including the Northern Territories, Alaska, Manitoba, Virginia, California, Texas, and Georgia. We even have members in Bangladesh and India! If you should find your home range underrepresented, who do you know that should be involved in our Chapter?



WA-BC Chapter membership heat map from the end of 2017.

WA-BC Chapter Member Recognized by American Fisheries Society

The Washington—British Columbia Chapter would like to congratulate one of our very own members for receiving honors from our parent organization, the American Fisheries Society. Sam Wilson (British Columbia Student Sub-unit President) was recognized as the runner-up for the J. Frances Allen Scholarship; an award that recognizes aquatic research promise, scientific merit, and academic achievement for female doctoral candidates. The recent *Fisheries* article stated, "Wilson's ambitious and diverse research is focused on understanding the sensitivity of juvenile salmon to climate mismatches. She aims to understand the implications of this on survival and abundance in the context of changing ocean conditions." Sam is currently a doctoral candidate in the Salmon Watersheds lab led by Jonathan Moore at Simon Fraser University. You can check-out some of her research at our meeting in Kelowna too where she will be giving a talk titled "Phenological mismatch reduces survival in wild steelhead trout (*Oncorhynchus mykiss*) population." Way to go Sam!



GREETINGS FROM THE CANADIAN AQUATIC RESOURCES SECTION OF THE AMERICAN FISHERIES SOCIETY



Photo: Emmanuelle Chrétien

Make sure to join CARS when you re-new your AFS membership this year
<http://fisheries.org/membership> Students are free!

Education Corner

AFS WEBINAR—A GUIDE TO GRASSROOTS ADVOCACY

Want to learn more about grassroots advocacy techniques? Join AFS for a free webinar on **February 22, 2018** from 10–11 am to learn how you can help AFS support the Recovering America's Wildlife Act in your state. Participants will learn the fundamentals of a congressional "field visit," the elements of a successful in-district meeting with a member of Congress, and how to prepare and deliver an "elevator speech" to spur a decision-maker into action! Register here: <https://register.gotowebinar.com/register/1084137543886627075>.

36TH ANNUAL SALMON RESTORATION CONFERENCE



The 36th Annual Conference will be held in Fortuna, California from **April 11-14, 2018**. The conference offers several workshops and tours that are applicable to salmon habitat restoration in Washington and British Columbia. Details on the meeting are online at: <https://www.calsalmon.org/conferences/36th-annual-salmonid-restoration-conference>.

INSTREAM FLOW COUNCIL

FLOW 2018: Managing Rivers, Reservoirs, and Lakes in the Face of Drought - Practical Tools and Strategies for Sustaining and Protecting Ecological Values of Water in Ft. Collins, Colorado on **April 24–26, 2018**. For more information go to: <https://www.instreamflowcouncil.org/conferences-flow-2018/>.



INSTREAM FLOW COUNCIL

Protecting, Maintaining, and Restoring Aquatic Ecosystems

AMERICAN FISHERIES SOCIETY

The Mid-Atlantic Chapter welcomes you to attend the American Fisheries Society 148th Annual Meeting from **August 19-23, 2018** in Atlantic City. Meeting sessions, events, and the trade show will be held at the Atlantic City Convention Center. Details on meeting can be found at <https://afsannualmeeting.fisheries.org/>.



COMMUNICATING THE SCIENCE OF FISHERIES CONSERVATION TO DIVERSE AUDIENCES

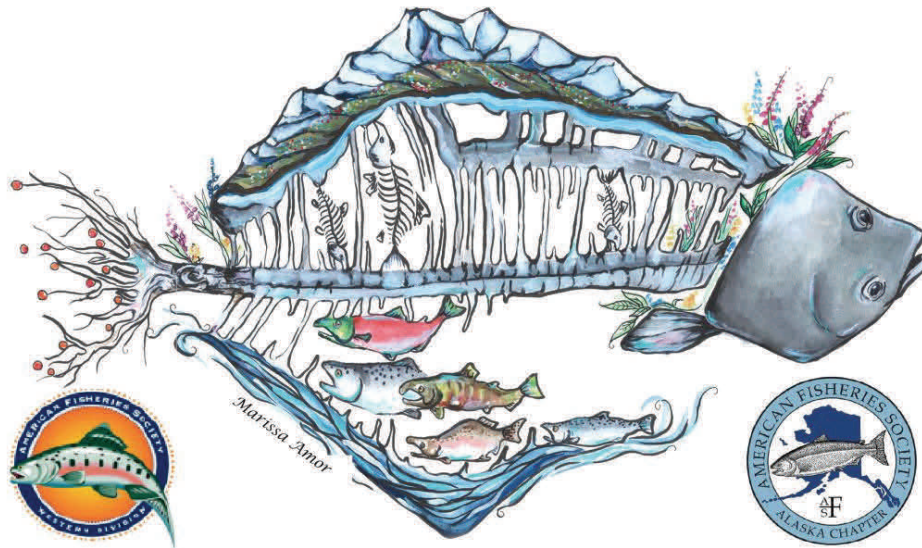
AUGUST 19-23, 2018

Education Corner

Change, Challenge, and Opportunity in Fisheries: Fishing for Solutions

Western Division American Fisheries Society Annual Meeting 2018
hosted by the Alaska Chapter AFS

21-24 May, 2018 - Anchorage, Alaska

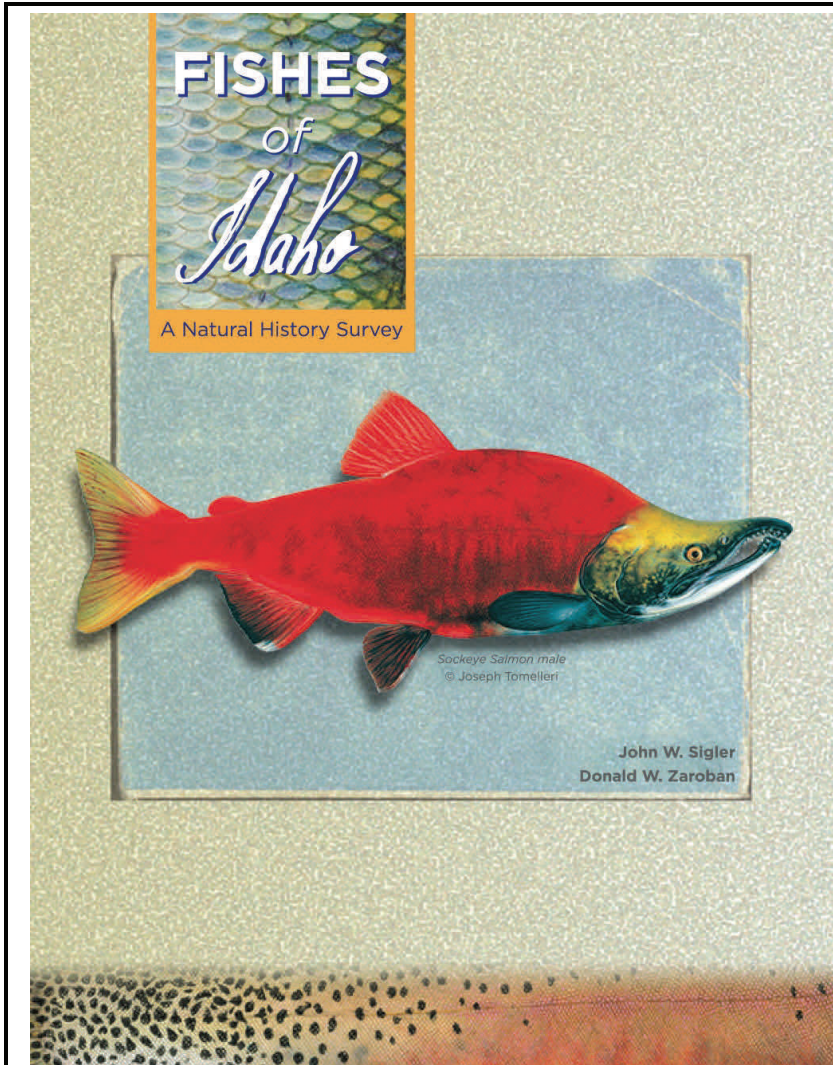


WESTERN DIVISION AMERICAN FISHERIES SOCIETY

All of your 2018 Western Division/Alaska Chapter American Fisheries Society Annual Meeting (**May 21–24, 2018**) lodging, program, and entertainment information needs can be found at <http://wdmtg.fisheries.org/>.

Oral and poster presentation abstract submissions **are now open** and are **due by March 5, 2018**.





Contents
FOREWORD – Cecil Andrus
ACKNOWLEDGEMENTS
INTRODUCTION
CHAPTER 1 An Overview-Idaho Fisheries Management
CHAPTER 2 Ichthyology 101—A Guide to the Study of Fish In Idaho
CHAPTER 3 Biogeography of the Native Fish Fauna of Idaho
CHAPTER 4 IDAHO’S AQUATIC GEMS
CHAPTER 5 Illustrated Key - Gerald R. Smith
CHAPTER 6 PETROMYZONTIFORMES
CHAPTER 7 ACIPENSERIFORMES
CHAPTER 8 CLUPEIFORMES
CHAPTER 9 CYPRINIFORMES
CHAPTER 10 SILURIFORMES
CHAPTER 11 OSMERIFORMES
CHAPTER 12 SALMONIFORMES
CHAPTER 13 ESOCIFORMES
CHAPTER 14 PERCOPSIFORMES
CHAPTER 15 GADIFORMES
CHAPTER 16 CYPRINODONTIFORMES
CHAPTER 17 SCORPAENIFORMES
CHAPTER 18 PERCIFORMES
GLOSSARY
LITERATURE CITED
SUPPLEMENTAL REFERENCES
INDEX

John W. Sigler received his Bachelor of Science and Master of Science from Utah State University in 1969 and 1972, respectively, from what was then the Wildlife Resources Department. He received his Ph.D. in Fisheries Biology and Management from the University of Idaho in 1980. From 1980 until 2006 John worked for a variety of consulting firms in the western United States and retired from the City of Pocatello, Idaho as the Senior Environmental Coordinator in 2012.

Donald W. Zaroban received his Bachelor of Science and Master of Science from the University of Nebraska-Lincoln in 1974 and 1987 respectively. He received his Ph.D. from the University of Idaho in 2011. He is currently the Curator of Fishes at the Orma J. Smith Museum of Natural History located at The College of Idaho and is a fish biologist with the Idaho Department of Environmental Quality in Boise.

Fishes of Idaho: A Natural History Survey is available for prepublication ordering from Caxton Press. A preorder link at: <http://caxtonpress.com/fishesofidaho.aspx> includes a 15% discount. The authors thank all of the contributors, both technical and financial, who facilitated the completion of this project.

105 Full Color Illustrations by Joe Tomelleri and 65 Scientific Drawings by Emily Damstra



Washington-British Columbia Chapter of the American Fisheries Society

Chapter Information

Website: <http://wa-bc.fisheries.org/>

Facebook: <https://www.facebook.com/wabcafs>

Twitter: <https://twitter.com/wabcafs>

Want to join AFS and the WA-BC Chapter? <http://membership.fisheries.org/>

Questions? Suggestions? Contact:

President Tamara Knudson at tamarak@spokanetribe.com

Want to write an article or submit any type of fisheries-relevant information to this newsletter? Contact:

Benjamin Cross at bekecr@gmail.com

The WA-BC Chapter of the American Fisheries Society, which includes members in Washington State and British Columbia, is an organization composed of professional biologists interested in the scientific conservation and enhancement of fish populations and their environment.

The mission of the Chapter is to:

- 1) advance the conservation and intelligent management of aquatic resources within a context of sound ecological principles,
- 2) gather and disseminate information pertaining to aquatic science and fisheries management, and
- 3) promote the educational and technical aspects of the fisheries profession.

In pursuit of our mission, we will strive to equitably represent the views of members, develop opportunities for effective leadership and conservation, and generate the resources necessary to carry out our programs.

The next WA-BC Chapter Annual General Meeting will be held in Kelowna, BC on March 19–22, 2018. wa-bc.fisheries.org/next-meeting/



2017-2018 Executive Committee of WA-BC Chapter

From left to right: Gabriel Temple, Sam Wilson (back), Orlay Johnson (front), Kirstin Gale, Tamara Knudson, Alix Silver, Brittany Jenewein, Benjamin Cross, and Ryan Klett