



# THE CONFLUENCE

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

Fall 2017

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The Washington-British Columbia Chapter of the AFS has been gearing up for our 2018 Annual General Meeting (AGM) in Kelowna, British Columbia on March 19—22. Don't forget to save the date, and we hope to see you there! Also, please consider submitting your symposium topics to Brittany Jenewein (btjenewein@gmail.com) via e-mail by December 15, 2017 to be considered for the AGM (more details are available at: <https://wa-bc.fisheries.org/wp-content/uploads/2017/11/2018-Final-Call-for-Symposia.pdf>). The Chapter was originally formed in 1978 as the North Pacific International Chapter and was later officially changed to the Washington-British Columbia Chapter. To signify the 40th anniversary of our Chapter, the theme of the 2018 AGM will be:

## **"40 Years of Fish and Fisheries in the Pacific Northwest"**

**SAVE THE DATE**

**40<sup>th</sup> Annual General Meeting**  
March 19—22, 2018  
Coast Capri Hotel  
Kelowna, B.C., Canada

COAST capri hotel

Washington-B.C. Chapter  
of the  
American Fisheries Society

More details will be provided in the weeks and months to come.

## **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*

It is that time of year again! We have several new officers to welcome to the WA-BC Chapter Executive Committee. Brittany Jenewein is a Resource Management Biologist for Fisheries and Oceans Canada and is serving as Vice President, Ryan Klett is an Anadromous Fish Biologist with the Colville Tribes and is serving as our Treasurer, Kirstin Gale is a Senior Research and Development Biologist with the Freshwater Fisheries Society of BC and is serving as Secretary, and Ben Cross is a Principal Fisheries Biologist for the Colville Tribes and is serving as our Communications Officer. Congratulations and thank you for graciously volunteering your time to serve our Chapter.

On November 11, 2017, the Executive Committee met the University of Washington in Seattle. We approved the Chapter budget for this next year, formed an Archive Committee to begin digitizing historical Chapter documentation and improve recordkeeping, and initiated a formal review of the Chapter Bylaws and Chapter Procedures Manual.

Planning for the 2018 Annual General Meeting is well under way! Please join us as we celebrate the 40th anniversary of the Washington-British Columbia Chapter! The meeting will be held at the Coast Capri Hotel in Kelowna, British Columbia March 19-22, 2018. Remember to mark your calendars! I encourage all of you to submit your ideas for symposia, submit your abstracts, and attend! We are migrating our website to a new platform and are regularly updating information. Meeting registration will now occur through the Chapter website and will open for the 2018 AGM in early January. If you are unable to attend the meeting, please consider a sponsorship donation to support the Chapter. We welcome volunteers to help out in a variety of tasks, so if you have been thinking about how you can get involved, this is a great place to start. If you are interested in volunteering, please contact me directly at [tamarak@spokanetribe.com](mailto:tamarak@spokanetribe.com).

The student subunits held their elections and have elected new officers. The SFU/UBC student subunit just hosted their fish trivia night. The University of Washington will also host a fish trivia night and is working on a mentorship program between graduate and undergraduate students.

The Western Division 2018 meeting will be hosted by the Alaska Chapter in Anchorage, Alaska. The meeting will be held May 21-25. Mark your calendars! The Alaska Chapter is seeking volunteers to serve on several committees. If you are interested in volunteering, contact Jeff Falke @ [afs.alaska.presidentelect@gmail.com](mailto:afs.alaska.presidentelect@gmail.com). Please help make this meeting a success!

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>. Please consider using this link to do all your holiday shopping and throughout the year!

Have a safe and wonderful Holiday Season!

Tamara Knudson,  
WA-BC Chapter President

### **Contact for President Tamara Knudson**

Email: [tamarak@spokanetribe.com](mailto:tamarak@spokanetribe.com) or [afs.wabc@gmail.com](mailto:afs.wabc@gmail.com)

## Student Subunits: Reports and Activities



The AFS-University of Washington Student Subunit has been busy getting their graduate-undergraduate student mentorship program up and running. So far eleven students have signed up as mentees to a diverse group of SAFS graduate students. The subunit is hosting a mentorship mixer that will kick off with a graduate student panel to answer questions and talk about all things grad-school (open to all undergraduates in the College of the Environment), and then follow with a reception for paired mentors and mentees to mingle. Another priority is getting the UW Bothell and Tacoma campuses involved in the subunit. Other events the subunit has in the works are their quarterly career development seminar, movie screening and restaurant fundraisers, and a skills workshop that will offer free LinkedIn profile pictures and an interactive knot-tying tutorial.



**Grace Workman**  
**UW Student Subunit President**  
[grace1rw@uw.edu](mailto:grace1rw@uw.edu)

Grace is a senior in the School of Aquatic and Fishery Sciences at UW.

She is working on her capstone with P. Sean McDonald to research crab bioenergetics through consumption experiments, which she will present as a poster at the WA-BC meeting in March. She also works at the Institution for Risk Analysis and Risk Communication in the Department of Environmental and Occupational Health Sciences. She developed her passion for marine science through her many childhood explorations on Lummi Island, and aspires for a lifelong career in Aquatic Sciences. Her plans after graduation include working for a year while she continues her graduate school search, and hopes to continue research in one of her favorite fields: shellfish and aquaculture, limnology, and invasive species.



**Elliott Allen**  
**UW Student Subunit**  
**Vice President**  
[emallen8@uw.edu](mailto:emallen8@uw.edu)

Elliott is a senior in the school of Aquatic and Fishery Sciences with minors in marine biology and environmental science resource management. Born and raised in Seattle, he has always been fascinated with the water and the creatures that call it their home. He recently studied abroad on the Caribbean island of South Caicos and spent his summer as a field technician with Cramer Fish Sciences. One day he hopes to attend graduate school and study river restoration to help the rivers of the Pacific Northwest.

Check out the rest of the AFS-UW officers and get updates on their activities at:  
<https://afsuw.wordpress.com/>



The AFS-BC Student Subunit, composed of students from University of British Columbia, Simon Fraser University, and University of Victoria, had their officer elections open until Nov 30, 2017. The nominees for each position were running unopposed and were expected to formally accept their positions on Dec 1! Sam Wilson will be President, Sean Godwin will be Vice President, Naomi Pleizier and Yangfan Zhang will be our Communications Officers, and Cameron Freshwater will be our Secretary. We're all excited to serve on the BC student subunit executive committee again this year!

We recently held our bi-annual fish trivia event, which was well attended (see page 4). We had about 25 participants from SFU, UBC, and throughout the Lower Mainland. We will be holding another fish trivia event in the spring semester, for those that missed our fall event. We, along with the other student subunits and the WA-BC Executive Committee, are currently looking for items for this year's silent auction to be held at the WABC AGM. Those interested in donating items should contact Sam Wilson at [bcstudentafs@gmail.com](mailto:bcstudentafs@gmail.com).

Check out AFS-BC and get updates at:  
<https://bcstudentafs.wordpress.com/>

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## Student Subunits (Continued)



**Sam Wilson**  
**BC Student Subunit President**  
 swilson471@gmail.com

Sam is a PhD candidate in the Salmon Watersheds lab led by Jonathan Moore at Simon Fraser University. For her graduate research, she is focused on understanding the sensitivity of juvenile salmon to climate mismatches and the implications of this on survival and abundance in the context of changing ocean conditions. Sam has been involved in AFS since 2010 and has held an executive committee position in the BC student subunit for the past four years.



**Sean Godwin,**  
**BC Student Subunit Vice President**

swilson471@gmail.com

Sean is the Vice President of the British Columbia Student Subunit of the American Fisheries Society. Sean is a PhD candidate at Simon Fraser University in Burnaby, BC under the supervision of John Reynolds, Larry Dill, and Martin Krkosek (U of T). Sean studies marine fish conservation and, in particular, how parasites affect the early marine life of wild salmon. His supervisors would say he spends way too much of his time playing in the outdoors, usually on the sides of cliffs.



**Shawna Warehime**  
**EWU Student Subunit President**

To get involved with the Eastern Washington University Subunit, please contact Shawna Warehime (bwitte2012@eagles.ewu.edu) or our Student Representative Orlay Johnson (orlay@comcast.net). Kaeli Davenport is the Subunit Vice President and Coty Jasper is Secretary/Treasurer for 2017–2018.

## BC Student Subunit Fish Trivia Night

by Brittany Jenewein, WA-BC Chapter Vice President

I had heard about the BC Student Subunit’s fish trivia nights and how successful they were, so I was excited when the subunit President, Sam Wilson, invite me to the latest one. The subunit usually hosts a fish trivia night twice per year, and in chatting with some folks who attended the last one, I learned they can be standing room only! This one wasn’t quite as busy, but all the seats were taken by the time the event began.

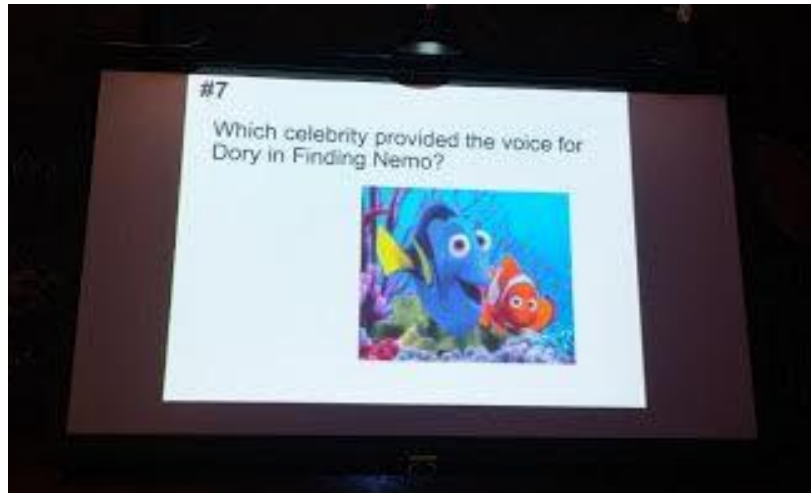


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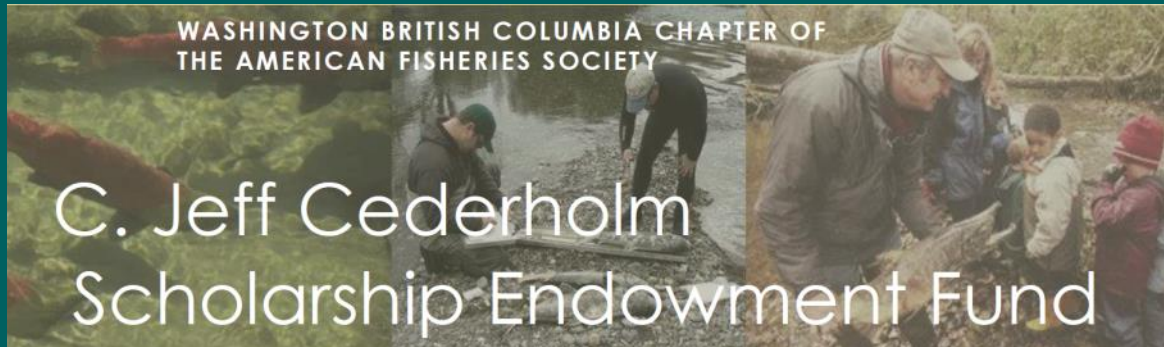
## **BC Student Subunit Fish Trivia Night (Cont'd from Page 4)**

Sam introduced me as a representative from the Chapter, and I took a few minutes to share the benefits of AFS membership at the Chapter level and updates on our upcoming AGM in Kelowna, BC. Once that was over, Sam took charge and got the game rolling right away. She had clearly been the host at previous events. I couldn't stay for the whole evening, so I didn't officially join a team. But, I had befriended some folks earlier in



the evening and I admit I may have given them a hint or two when they were stuck (I just couldn't resist!). Hopefully I was actually a help and didn't give them a wrong answer... Each round of the quiz had a lot of questions, and they were NOT easy. The categories I saw were really fun, even if the questions did stump me; "Fishy Celebrities" (see the picture of Dory to the upper right!) and "What's that weird fish?" were my favourites. Each round was pretty rapid-fire, but everyone was taking it very seriously, all in an attempt to win the prize! I never saw which group won the first round, but it was great to see a mix of students, professors, and industry fish folks come together for an evening of fun and networking. If you want to attend a BC Student Subunit fish trivia night in the future, contact Sam and get on the distribution list! The UW Student Subunit also hosts a fish trivia night on occasion; contact Grace Workman ([grace1rw@uw.edu](mailto:grace1rw@uw.edu)) for details of the next event. Don't forget to bring your team; you'll need to put all those minds to work!





## 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.

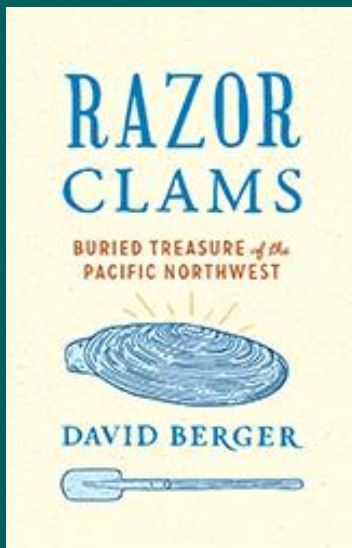
## How to Apply

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](mailto: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.

**Applications will be accepted through February 16th,**



Orlay Johnson,  
Reviewer



Razer Clams—Buried Treasure  
of the Pacific Northwest



David Berger,  
Author

Image from [www.humanities.org](http://www.humanities.org)

## The Book Nook

### “Razor Clams – Buried Treasure of the Pacific Northwest”

Review by Orlay Johnson

Author: David Berger. Pub: University of Washington Press, Seattle. 2017.

What I most enjoyed about this book was how much fun it was to read. I expected a scholarly tome, and I have recently read and reviewed a slew of science and local natural history books, that to put it mildly, did not impress me much. So, I was incredibly pleased when after reading the first paragraph of this book, I realized that if the rest was as good as the beginning, I would fall in love with it.

To put it mildly, “Razor Clams” is a spirited, celebration of the joy of razor clamming – it is also a biology and history of the clams as well as lively paean to the thousands who hunt them each year. Those hearty souls running out on a wind-swept rainy beach as the tide recedes, so they can grunt and dig in the wet sand like a maniac in an attempt to grab a smallish creature about the shape and size of an old straight razor – all while avoiding being drown as the waves flood your hole. Idiots on the beach, my father would say as he returned from his most recent dig.

Best news is that the rest of the book did stand the test. The book begins when the author, as a first time clammer, brings his wife along on his first dig and walks us through the joys of falling in love with these devious and delicious bivalves. The Intro starts: *The state has confirmed a spring razor clamming opening, so I immediately telephoned my wife. “Skip work. There are some great low tides coming up.”* The story gets better from there and Berger ends the Introduction with some of excellent razor clam recipes: *Basic sautéed razor clams, sautéed razors in brown butter, and sautéed razors with capers.*

The book is a cross between an iconic seat of your pants history of clamming (including the “new-fangled” clam tube and clam gun), battles over treaty rights (a “scared treaty” which tribes have vigorously defended all the way to victory (twice!) in the US Supreme Court), and a wild celebration of the sandy beasts themselves. He didn’t grow up clamming, but he obviously has fallen in love with *Siliqua patula*, the golden colored king of clams. As I love razor clams, I was inclined to like the book and author from the start.

His book will tell you how to find them, dig them, clean them, and cook them including a plethora of wonderful recipes. He also focuses on the biology and history of razor clamming – which is far more complex and interesting than you might expect. The clams are found from the Aleutians to California, but the best place to find them in the entire world is a 26 mile or so stretch of Washington’s outer coast.

The book goes into many of the diseases that infect the clams. While today, the species has healthy population numbers – it wasn’t always so, and he discusses past abundances, declines, and other tribulations such as Domoic Acid and NIX, both still poorly understood and very scary.

***Continued on Page 8***

## The Book Nook (Continued from Page 7)

While we often focus only on salmon and our "salmon wars" as forming the identity of this region, there is no doubt both the identity and psyche of the region have been shaped by these little fast digging delicious denizens of the beach.

David uses a combination of the "interview people" style of science writing and the "do your research and report the history" style – and both are well done. I loved his talks with local state, federal, and tribal biologists – especially locals including "Mr. Razor Clam", Alan Rammer himself, who is also a main character in "The Highest Tide" the award-winning book by Jim Lynch. I really do think Berger joins an elite class of NW writers.

He describes in detail the history and ingenuity in developing new techniques to capture a creature so challenging. But not all is smooth sailing as seen in the tale of James Batstone, the inventor of the "razor clam tube" (aka "Clam Gun"). He also tries to answer, or at least discuss, the question for modern clammers, "tube, gun, or shovel?".

Something many of us find perplexing is how on earth our state and tribal managers have been able to sustain the clam populations when literally thousands of people descend on the beaches for clam openings. You'd think the stocks would be quickly exhausted - yet, the species numbers stay strong. Berger discusses the laws, history, rules, regulation, and enforcement of clamming, plus something that I think is incredibly important. People often can't understand how the state and tribe so often agree on what needs to be done – and that is because working biologists from all level of governance generally agree on what needs to be done. In my estimation, overall this is well worth the read. So, as Dr. John Smith, Professor of Fisheries and later Dean at Gray Harbor College used to yell "Clam on, ye diggers, Clam on!"

# 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

### UPPER COLUMBIA SALMON RECOVERY BOARD

Upper Columbia Science Conference - The Science of Survival in Wenatchee, Washington on **January 24–25, 2018**. For more information go to: <http://www.ucsr.org/workshops-and-conferences/2018-uc-science-conference/>

### RIVER RESTORATION NORTHWEST ANNUAL STREAM RESTORATION SYMPOSIUM

RRNW is gearing up for the 76th Annual Stream Restoration Symposium at Skamania Lodge in Stevenson, Washington **February 6-8, 2018**! We look forward to seeing you at the Symposium in February! To get all the details, please visit our website at [www.rrnw.org](http://www.rrnw.org).



### INSTREAM FLOW COUNCIL

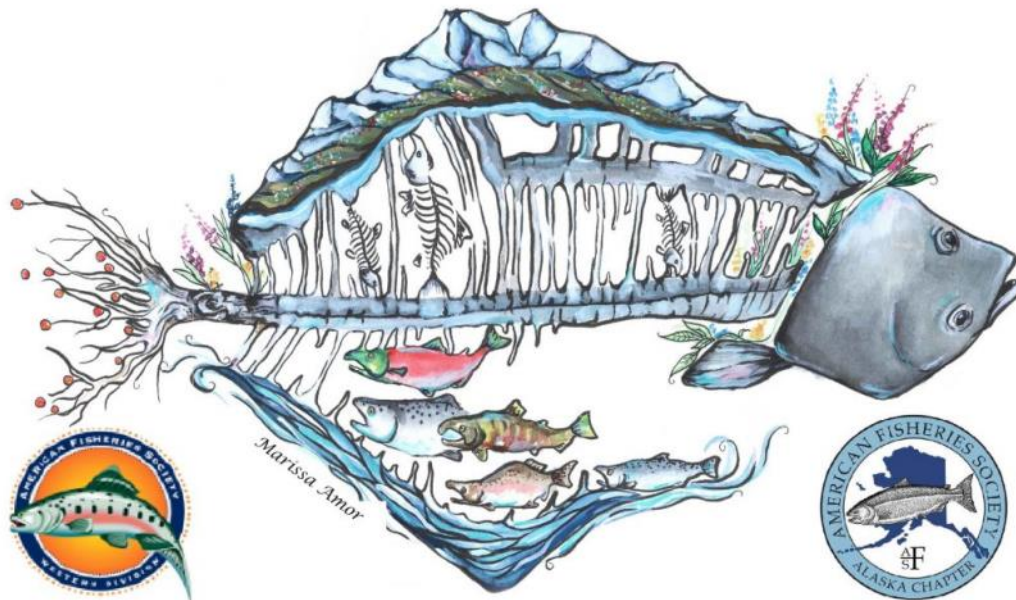
FLOW 2018: Managing Rivers, Reservoirs, and Lakes in the Face of Drought - Practical Tools and Strategies for Sustaining and Protecting Ecological Values of Water in Ft. Collins, Colorado on **April 24–26, 2018**. For more information go to: <https://www.instreamflowcouncil.org/conferences-flow-2018/>

### WESTERN DIVISION AMERICAN FISHERIES SOCIETY

*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**





## 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](mailto: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](mailto: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 in March 19–22, 2018.**

**Watch for the latest updates!**  
<https://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