



WINTER 2022 ISSUE

THE CONFLUENCE

NEWSLETTER OF THE WASHINGTON-BRITISH COLUMBIA
CHAPTER OF THE AMERICAN FISHERIES SOCIETY

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Letter from the President

Greetings and a belated happy new year,

I hope this message finds you all well. Holiday festivities were a little muted for me once again this year as the internal debate over social aggregations and Covid entered the decision-making rubric regarding travel or just venturing out. Modest improvements were observed over that last year as I did visit with siblings and other relatives not seen since 2019. This time of year is also a period where draft annual reports arrive in my email inbox as commonly has holiday greetings and as I review them I'm reminded of the professionalism of my teams in performing the work that contributes to the conservation and management of aquatic resources. Hoping to start brainstorming with them soon about possible abstracts for the 2022 AFS meeting in Spokane.

Speaking of which, a large collection of folks from our chapter, the western division, and the parent society of AFS have begun the process of organizing what we expect to be a great gathering in the inland northwest for our annual meeting. Please reach out to any member of our chapter executive committee with any questions you may have on this effort. The overarching theme of the meeting, "What do fish mean to us?", is an acknowledgment that diverse perspectives on aquatic resources exist in our shared landscape and that there is a necessity of bringing our professional community together from time to time to build upon these perspectives to enhance our understanding of fisheries ecology, conservation, and management. I encourage all of you investigate the meeting webpage (<https://afsannualmeeting.fisheries.org/>). We are currently soliciting proposals for symposia to develop what we expect to be program rich in scientific content and training opportunities as we gather with our professional family in Spokane. Please consider contributing examples of your work as part of a symposia or contributed oral or poster presentation. The WA-BC chapter will be providing some opportunities for student and professional members to take advantage of to support some of the costs associated with attending this meeting. Keep your eyes open for messaging on this topic in the coming weeks.

Cheers,



Alf Haukenes
President, WA-BC Chapter of AFS
ahaukenesafs@gmail.com

Say hello to the 2022 Executive Committee



ALF HAUKENES
President



JEFF FRYER
President Elect



JANINE BRYAN
Vice President



PAUL SPRUELL
Past President



DYLAN GLASER
Secretary



TAMARA KNUDSON
Treasurer



HALEY TUNNA
Communications



ALEX LOPEZ
Student Subunit Rep

Please [reach out to us](#) to learn more about what we are up or get actively involved with the chapter.

Announcements and Upcoming Events



APPLY OR NOMINATE A GREAT PROJECT NOW FOR
THE WESTERN DIVISION AFS

2022 RIPARIAN CHALLENGE AWARD

Deadline for entry is March 1, 2022

Save the date!



152nd ANNUAL MEETING

Spokane

AUGUST 21-25, 2022

Webinar Content Available to Members of AFS



*Continue your professional development with
The American Fisheries Society*

DID YOU KNOW...

...that the American Fisheries Society hosts a monthly [webinar](#) series for members of AFS? The webinars focus on an area of specific interest, rotating on a monthly basis to provide valuable information to fisheries professionals in all fields. In addition to being able to watch and participate in the webinars live, AFS members have access to all previous webinar recordings via their AFS login.

FISHERIES TECHNIQUES:

- Chemistry to Conservation: Using Otoliths to Advance Fisheries Management
- How Many Candles on the Birthday Cake? The Vital Role of Age Estimates in Stock Assessments
- Fish Bioenergetics 4.0
- The 100-Watt Method: A Protocol for Backpack Electrofishing in Small Streams
- The Stock Assessment Process: Counting Fish
- Intro to eDNA: Applications, Advantages, and Implications
- Using Bayesian Clustering Algorithms to Discover Population Genetic Structure

HUMAN DIMENSIONS OF FISHERIES

- Climate Change and the Columbia River Tribes
- Understanding the People Part of Fisheries: An Introduction to Conservation Social Science

FISHERIES SCIENTISTS: ADVANCE YOURSELF

- Verbal Judo! A Method to Improve Your Ability to Talk to Those Hostile to Conservation
- Connecting the Dots: Diversity and Inclusion, and Collaborative Networks in Fisheries
- Getting Hired – What Students Need to Know
- Surviving Peer Review
- Navigating a Changing Fisheries Workplace
- Structured Decision Making as a Tool for All Occa-

sions

- Resources and Strategies for AFS Student Subunits

FISHERIES CONSERVATION

- Coloring in the Lines – Mapping Surface Water Presence in a Rapidly Changing Climate
- Creating a Movement to Save Migratory Fish from Local to Global
- The Omega Principle: Seafood and the Quest for Long Life and a Healthier Planet
- What Can a Long-term Chinook Salmon Redd Survey Tell Us about Habitat Quality and Climate Change in a Dynamic Mountain Wilderness Landscape?
- Stream Simulation Design Methodology: Design Methodology for Adapting Road Crossing Infrastructure, Bridges and Culverts to Climate Change
- River Connectivity and Biological Complexity
- Multispecies and Watershed Approaches to Freshwater Fish Conservation
- A Clean Air Act Success Story: Evidence of Chemical and Biological Recovery in an Acidified River

ALL THINGS AQUACULTURE

- Hatchery Design in Aquaculture
- Establishing Aquaculture Opportunity Areas and How to Get Involved
- Mythbusting Marine Aquaculture

FISHERIES SCIENCE: SPECIES SPECIFIC FOCUS

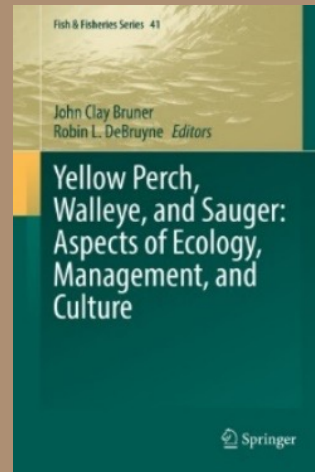
- More than a River Monster: Conservation and Management of Alligator Gar
- Fleet Heterogeneity and Economic Performance in American Lobster
- Trout and Char of the World

...and many more!

Yellow Perch, Walleye, and Sauger: Aspects of Ecology, Management, and Culture

Editors: John Clay Bruner and Robin L. DeBruyne

Springer Fish & Fisheries Book Series: Volume 41



The editors have assembled an expert group of authors to compile up-to-date information on the biology and management of Walleye, Sauger, and Yellow Perch. Topics include research on systematics, genetics, physiology, ecology, movement, population dynamics, culture, recent case histories, and management practices that will be of interest to managers, researchers, and students who deal with these important species.

Spawning Characteristics of Yellow Perch During Periods of Water Level Fluctuations in a Hydropower Reservoir

Kyle J. Matt, Stuart A. Welsh, Dustin M. Smith

A Comparison of Aquaculture Production Methods for Optimizing Production of Fingerling Yellow Perch (*Perca flavescens*)

Cathleen M. Doyle, David A. Culver, Morton E. Pugh, Jesse E. Filbrun

Evaluation of a Statewide Yellow Perch Bag Limit for Michigan

David F. Clapp, Andrew S. Briggs, Randall M. Claramunt, David G. Fielder, Troy G. Zorn

Distribution and Abundance of Pelagic Larval Yellow Perch in Lake St. Clair (USA/Canada) and Adjoining Waters

Robin L. DeBruyne, Taqja R. Tucker, Clara Lloyd, Andrew S. Briggs, Megan Belore, Edward F. Roseman

Using Genomic Data to Guide Walleye Management in the Great Lakes

Peter T. Euclide, Jason Robinson, Matthew Faust, Stuart

A. Ludsin, Thomas M. MacDougall, Elizabeth A. Marschall et al.

Walleye Larviculture in Water Reuse Aquaculture Systems

J. Alan Johnson, Kevin Kelsey, Robert Summerfelt

Effects of Parasitocidal Hydrogen Peroxide Treatments on Walleye Hatching Success in a Recirculating System
Guy D. Eroh, Robert B. Bringolf, Alvin C. Camus, Jean L. Williams-Woodward, Cecil A. Jennings

Seasonal Movement Patterns and Distribution of Walleye in a Central Appalachian Hydropower Reservoir
Dustin M. Smith, Stuart A. Welsh, Corbin D. Hilling

Managing Tribal Fisheries and Employees on the Reservation
Carl A. Klimah

Can You Hear Me Now? Design Considerations for Large Lake, Multispecies Telemetry Projects
Aaron Shultz, Carl A. Klimah, Jocelyn Curtis-Quick, Rachel Claussen, Jalyn LaBine, Adam Ray

Ocean Outbreak – Confronting the Rising Tide of Marine Disease by Drew Harvell

Book Review By Orlay Johnson

Ocean Outbreak is an excellent and very readable book by Dr. Drew Harvell on research by her and her colleagues about the rise of pandemic-like diseases in the ocean and their impact on four iconic marine species. While her accounts of scientific dive trips are adventurous and often humorous, what Dr. Harvell discusses is disturbing and not something to take lightly.

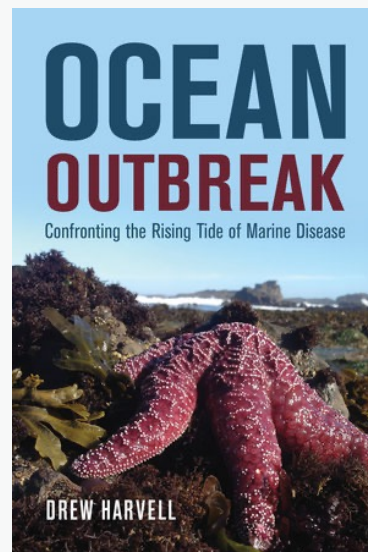
Something I really appreciated is that the book has a comprehensive reference list (20 pages) and a full index (15 pages) so you can check her facts and find a quote if you need it.

I initially expected that a book with a title like “Ocean Outbreaks” would be a dry epidemiology book of various aquatic diseases – sort of a less expensive fish disease textbook. But that is not the case, rather it is a collection of very readable adventures about scientists identifying disease outbreaks in the field, collecting samples, and how in the lab the pathogenic organisms are identified.

The book is very logically organized with the first chapter presenting what the problem is, the next four giving examples of the outbreaks in different species. Chapter 5 shows how the ocean itself can overcome diseases and ends with an Afterward on what happens next if we do nothing. The four central chapters describe research by Drew and her colleagues on disease outbreaks in corals, abalone, salmon and starfish and the devastating pandemics that hit them. Three of these four outbreaks occurred in part along the

Pacific Coast. The author takes us into the field with her students and colleagues showing us how they identify and conduct research into these diseases. The personal descriptions of how this was conducted is one of the best parts of any book I have read in recent years and well worth the price of the book.

However, what makes the book so readable is that this isn’t dry science. In each chapter she focuses on the field research, often done via SCUBA to observe the effects of a disease outbreak. She takes the reader to the front lines of battles with these diseases. Chapter 5 “Nature’s Services to the Rescue” provides a more positive outlook on how the ocean itself can restore the natural balance and block the spread of disease if we leave it alone. This is most vividly seen in a dive exploration to a tropical site where offshore grasses have blocked the spread of disease from polluted nearshore waters.



In this chapter and especially in the short Afterword “The Next Big Outbreak”, she presents solutions, which is basically a call to action. We must “enact policy changes and develop new and innovative solutions from nature” if we have any hope to reduce major outbreaks, save some ocean ecosystems, and protect our fragile environment. She concludes showing how we can create healthier seas (i.e., stop polluting them) and combat infection using “the ocean’s own pathogen-fighting weapons”.

She writes:

“At this point in the story, we do not need a crystal ball to see the future. Warming the climate and polluting the sea will give new opportunities to underwater microorganisms, resulting in explosive new outbreaks of infectious disease. The bigger question is how will we respond? We have transformative technology for disease diagnostics and surveillance on our side that could make a crucial difference if we put it to work. My hope is that we will be fast enough to develop innovative ways to control the eruptions of new outbreaks and save the ocean’s biodiversity.”

Drew Harvell completed her Bachelor’s and Master’s degrees in zoology with honors from the University of Alberta and attended the University of Washington to complete a Ph.D. in zoology with Dr. Bob Paine (with field work at Neah Bay) and graduated in 1985. In 1986 she joined the faculty in the Department of Ecology & Evolutionary Biology at Cornell. Her research group focuses on a range of topics, including marine invertebrate biology and diversity to climate change and its impacts on disease ecology. She has published over 170 peer reviewed publications and is a fellow of the Ecological Society of America. This is her second book.



Calling all students and early career professionals!

Words by Dylan Glaser, Secretary of WA-BC Chapter

I'm writing to gauge interest in re-establishing student subunits within our chapter! Student subunits are geographically isolated groups of students and mentors that aim to provide networking opportunities, career guidance, and support for conference attendance. From 2018-2021 I was the Canadian representative for the Students and Early Career Professional subsection of the Education section of AFS (a mouthful, I know) and I saw all sorts of levels of student engagement among subunits. You can really tailor your subunit to suit your needs!

Student subunits can operate out of any geographical location, typically at a school level, but subunits can also be comprised of students and early career professionals from multiple schools/regions. These specifics are up to the subunit; it's all about getting fishy folks together!

Student subunits provide opportunities to hang out with friends to learn, network, socialize, and have your voice heard with your parent chapter's executive committee. Common activities can include anything from going for hikes or ski trips, hosting a webinar series, going fishing with local mentors, to heading to a local pub for fish trivia. Being a subunit opens opportunities to access some funding from your parent chapter (i.e. the WA-BC chapter of AFS) or solicit sponsorship elsewhere (e.g. your university, venues, private) to support subunit events or conference support. Besides the networking and fun, being involved with a professional society looks great on your resume when job hunting.

I'm writing this to now because it's a great time to re-vitalize student subunits within WA-BC. Things are slowly getting back to normal(ish? I hope.) as in person meetings begin to re-appear, the next AFS annual general meeting is to be held in our own backyard, Spokane, WA. As the chapter that is responsible for the region where this conference is located, student subunits can have plenty of opportunities to show off our great region and shape the events that they want to see at the next AFS AGM.

If you're interested in starting a subunit or have questions shoot me an email at dylan.glaser91@gmail.com.

WASHINGTON-BRITISH COLUMBIA CHAPTER OF THE AMERICAN FISHERIES SOCIETY

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

Contact Information

Want to join AFS and the WA-BC Chapter?

<http://membership.fisheries.org/>

Questions? Suggestions?

Contact President Alf Haukenes at ahaukenesafs@gmail.com

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

Contact the Communications Officer Haley Tunna at haley.tunna@gmail.com

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

<https://www.facebook.com/wabcafz>

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