

# Fish Health Section



## FHS NEWS – March 2022

**Fish Health Section website:** <https://units.fisheries.org/fhs/>

**Fish Health Section Facebook Site:** <https://facebook.com/FishHealthSectionAFS>

**Fish Health Section Twitter feed:** @AFSFishHealth

It's not too late to renew your AFS and FHS membership at <https://fisheries.org/>. Thank you to the members who have already renewed. Less than half of you receiving this newsletter have renewed so far this year.

## People of the Fish Health Section: Commemorating 50 years

Dear Fish Health Section members,

This month, I am pleased to feature two early career professionals and one mid-career professional. Next I want to feature two of our 24 members that are Aquatic Animal Health Inspectors. [The first people nominated get featured first.]

Submitted by Gary Marty, FHS President (Gary.Marty@gov.bc.ca)

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health career.

Hi. My name is **Danielle Van Vliet**. I am a Fish Health Microbiologist with the Utah Division of Wildlife Resources in Logan Utah. My primary role now is virologist, but I have rotated through parasitology and bacteriology during my 6 years with UDWR. I joined the FHS in 2011, when I started grad school at Michigan State University. I knew I wanted to devote my life to the field, and I knew the FHS was going to be a major resource for networking, collaboration, knowledge, and friendship. These are the same reasons I continue to renew my membership every year. The two most instrumental people in my career have been **Mohamed Faisal** and **Thomas Loch**. I rely almost daily on the lessons (in the lab, and beyond) I have learned from both. In fact, I still hear Dr. Faisal's voice saying, "Think like a scholar." My current boss, **Wade Cavender**, helps remind me of the nuances and intricacies of fish health management beyond the laboratory. I am looking forward to how my career will continue to develop. I hope to be able to combine my laboratory experience with fisheries management and have a fulfilling and holistic fish

Hello FHS members! My name is **Heather Walsh**. My work in fish health began as an undergraduate student at the U.S. Geological Survey Eastern Ecological Science Center (**EESC**) in Kearneysville,



WV. I stayed there through all my training, and in January I was hired on as a Research Fish Biologist. I benefit from being a FHS member through the newsletter, fish disease workshops, and the summer seminar series. I joined the FHS the year I gave my first presentation: at the FHS Annual meeting in Park City, UT in 2009. I was a bundle of nerves, but I felt accepted by a wonderful group of people who shared a common interest. My dissertation work was the highlight of my time at EESC. I developed molecular pathology techniques to identify disease in smallmouth bass, including *in situ* hybridization, intersex genes (testicular oocytes), and a testis transcriptome. I performed all the bioinformatics in Linux (not an easy feat for me). I have appreciated unwavering support from **Vicki Blazer**, **Patricia Mazik**, and **Luke Iwanowicz**. My future work will focus on developing non-lethal markers of contaminant exposure in smallmouth bass and to assist in the development of a fish health biosurveillance network.

Hi. My name is **George E. Sanders**. I work for the University of Washington, Department of Comparative Medicine. My job is 75% aquatic animal work, which includes co-managing a



zebrafish facility, protocol review/development, facility design, veterinary care and oversight of various research animals which now include octopus species. Drs. **Ron Thune**, **Al Camus**, and **John Hawke** cultivated my interests in aquatic animal health at Louisiana State University during Veterinary School. Drs. **Jim Winton** and **Michael Kent** were excellent Fish Health mentors after my arrival at the University of Washington for my residency in Laboratory Animal Medicine. I joined the Fish Health Section in 2000 as part of the process to become an FHS-certified Fish Pathologist, which I completed in 2004. I remain an AFS-FHS member because of the people, meetings, and my service on the Continuing Education Committee. A highlight of my career was the opportunity to participate in management and control of the Foreign Animal Disease, Spring Viremia of Carp virus outbreak in the United States in 2002. The investigation took me to North Carolina, where I worked with other fish health specialists and veterinarians. I received an award for that work from the USGS in 2005.

### **AFS-FHS Call for Nominations- First Call, ends April 15<sup>th</sup>**

Do you know someone who can help contribute to the Fish Health Section?  
Are you looking to be more involved in your professional community?

Those that volunteer their time to serve on FHS committees gain valuable experience contributing to the greater fish health community, all while fostering new connections and expanding their involvement.

Here are some statements from past Committee Chairs on the benefits of volunteering to serve the AFS-FHS membership:

“As the first ever formed section within the American Fisheries Society, the Fish Health Section has more than five decades of outstanding excellence in the fields of aquatic animal health. The engines of that excellence are our amazingly dedicated experts that comprise the AFS-FHS membership. When one seizes the opportunity to serve on one or more AFS-FHS committees, one simultaneously seizes the opportunity to not only tangibly shape the section and its many activities, but also positively influence the current and next generations of aquatic animal health professional and

veterinary students and members. As an active AFS-FHS volunteer, one will also undoubtedly make countless personal connections and establish life-long collaborations and friendships that are beyond invaluable for students and seasoned AFS-FHS members alike. So never forget, all the great things the AFS-FHS has and continues to do results from the dedication of you all!" – *Dr. Tom Loch, Michigan State University*

"I served on the Nominating and Balloting Committee as a young professional and the greatest benefit that I feel I received was the involvement and connectedness to the Section. I felt that I was able to interact with many other committee members, including EXCOM members, which helped solidify my space in our Section. I plan on sticking around this field for a long time and serving on committees is a great way to stay involved and current on our small, but very important, organization." – *Dr. Danielle Van Vliet, Utah Division of Wildlife Resources*

"A major benefit of volunteering your time to serve the AFS-FHS membership is **support from colleagues during turbulent times**" – *Dr. Gary Marty, B.C. Ministry of Agriculture, Food, and Fisheries*

The Nominating and Balloting Committee is seeking nominees for the following positions:

- Vice-President (4 year term)
- Technical Standards Committee (3 year term)
- Professional Standards Committee (3 year term)
- Policy/Position Development Committee (3 year term)
- Nominating and Balloting Committee (3 year term)

More information on these positions can be found on the FHS website.

<https://units.fisheries.org/fhs/about/by-laws/>

All nominees must be Fish Health Section members in good standing. Nominees for the Professional Standards Committee must be a Certified Fish Health Inspector, a Certified Fish Pathologist, or a Doctor of Veterinary Medicine.

The nomination period is open until April 15<sup>th</sup>, 2022. Please send all nominations to Jayde Ferguson, [jayde.ferguson@alaska.gov](mailto:jayde.ferguson@alaska.gov)

Don't miss out on this chance to serve our important fish health organization!

### **AFS-FHS Summer Seminar Series**

## **We are pleased to announce the AFS-FHS Summer Seminar Series is back for another year!**

Over the past two years, graduate students and early career professionals have had limited chances to network or share their important work. With the cancellation of in-person meetings (AFS-FHS, WFDW, EFHW, etc.) these opportunities have become even more limited. This summer seminar series provides an avenue for young scientists to showcase their work and give us all a chance to stay connected. If you missed the 2020 or 2021 series, the presentations have been archived here:

<http://z.umn.edu/fishhealthseminar>

## **We will again be awarding Best Student Paper Awards to support student travel, made possible by our generous sponsors!**

### **Want to present?**

This is a low-stakes opportunity for students and early career professionals to introduce themselves to a mix of lab groups from across the country and show off their work. Presentations (20 minute talk followed by 5 minute Q&A) will take place on Thursday afternoons (12-1 pm Central Time) from May 12 - Aug 18.

Eligibility for the best presentation awards will be limited to **active AFS-FHS student members** so make sure your membership is up-to-date!

Slots are limited and will be allotted in a first come, first serve basis. Preference will be granted to **active AFS-FHS student members** so update your student membership now!

### **Want to be notified of upcoming seminars?**

Anyone interested in receiving announcements regarding upcoming seminars and abstracts can join the AFS Summer Student Seminar Listserv.

The seminars are free and open to the public - please forward these announcements to your networks. The seminar calendar and Zoom access information will be available mid-April.

### **Important links:**

[Student and early career professional presentation signup.](#)

[AFS-FHS Student Seminar Series Listserv](#)

[Seminar calendar and Zoom access information](#)

If you have any questions, please don't hesitate to contact us. We hope to see you this summer!

Matt Griffin ([matt.griffin@msstate.edu](mailto:matt.griffin@msstate.edu))

Megan Shavaliier ([shavali1@msu.edu](mailto:shavali1@msu.edu))

Nick Phelps ([phelp083@umn.edu](mailto:phelp083@umn.edu))

### **Call for Content**

Do you have a puzzling diagnostic case? Or do you have a new diagnostic finding that might interest others? How about newly published research? I am starting a new feature to highlight Fish Health Section Members' current conundrums and accomplishments. Think about what you could submit and contact me at [stacy.a.strickland@odfw.oregon.gov](mailto:stacy.a.strickland@odfw.oregon.gov) with your ideas. Limit to be around 1 page including graphs/pictures. Especially during these virtual meeting and conference times, let's share our work and keep our peers up-to-date on what's happening in the world of fish health!

Thanks in advance for your submissions!

Stacy Strickland, AFS-FHS Newsletter Editor

## **MEETINGS, WORKSHOPS AND COURSES**

### **Salmon Disease Workshop**

Oregon State University

Corvallis, OR

June 20 – July 1, 2022

### **Pre-registration:**

This workshop is designed for professionals working in the fish health field and graduate students and will emphasize recent advances and developments in our understanding of salmonid diseases.

Topics: detection and diagnosis, new and emerging pathogens, cell culture techniques, histopathology, current status of important salmonid pathogens, treatment practices, epidemiology.

The workshop is limited to 20 participants, but we are pre-advertising to determine if there will be sufficient interest to open registration. Cost \$1500 or 5 graduate credits. If you are interested in attending, contact Jerri Bartholomew by March 15; [jerri.bartholomew@oregonstate.edu](mailto:jerri.bartholomew@oregonstate.edu)

**61st AFS FHS Western Fish Disease Workshop**  
May 16-18, 2022, with a day of CE on May 19  
Hood River, Oregon  
Best Western Hood River Inn and Conference Center

Save the date! Come to Oregon!

Registration and call for abstracts open now.  
Keep an eye out on the website for more information.

<https://units.fisheries.org/fhs/wfdw/>



**9<sup>th</sup> International Symposium on Aquatic Animal Health (ISAAH)**  
Santiago, Chile  
September 5-8, 2022

RE: Student Awards

The 9th International Symposium on Aquatic Animal Health (ISAAH9) will be held September 5 – 8, 2022, in Santiago, Chile. The ISAAH is a truly unique event, held every four-years, and hosted in conjunction with the American Fisheries Society [Fish Health Section](#). The [ISAAH9](#) website is now available and will be updated frequently with meeting details. Registration will open in early April.

We are currently soliciting applications for the AFS-FHS [Sniezko Student Travel Award](#), which will award up to \$1500 to AFS-FHS student members to attend ISAAH9. Students who wish to be considered must submit their abstracts by March 31st. If you are not already a member, click here to [join AFS-FHS](#).

Similarly, students wanting to participate in "[Best Student Paper](#)" competitions should indicate their preference during abstract submission. Judging criteria for student awards are attached with this announcement.

Abstract submission for the general program is now open. We are still taking suggestions for special sessions. If you have a topic for consideration or would like to organize a session, please contact Matt Griffin ([matt.griffin@msstate.edu](mailto:matt.griffin@msstate.edu)) with the subject heading "ISAAH 2022 Special Sessions".

Due to current COVID restrictions and social distancing requirements, posters will be presented virtually. Oral presentations will be given in person.

Follow this link to submit abstracts: [ABSTRACT SUBMISSION FORM](#)

The following topics have already been submitted for consideration:

WAVMA/AAFV (Continuing Education Opportunity) Parasite Life Cycles  
Zebrafish/Lab Animal Models Modeling in Aquatic Animal Health  
Genomic Applications in Fish Health Emerging Diseases  
Immune modulation in Fish Health Management Myxozoa  
Microbiomes: Applications in Fish Health Climate Change: Impacts on Fish Health  
Polymicrobial Infections Toxic Algae  
Food Security

We look forward to hearing from you and hope to see you in Santiago!

### **The Organizing Committee**

Fernando Mardones, School of Veterinary Medicine, Pontifical Catholic University, Chile  
Marilia Salgado Caxito, School of Veterinary Medicine, São Paulo State University, Brazil  
Romina Ramos Ríos, School of Veterinary Medicine, Pontifical Catholic University, Chile  
Francisca Córdova Bührle, School of Veterinary Medicine, Pontifical Catholic University, Chile  
Natalia Zimin-Veselkoff, School of Veterinary Medicine, Pontifical Catholic University, Chile  
Esteban Soto, School of Veterinary Medicine, UC Davis, USA  
Matt Griffin, College of Veterinary Medicine, Mississippi State University, USA.

## **JOBS/GRADUATE ASSISTANTSHIPS**

### **Natural Resources Biologist V (Shellfish Pathology)**

#### **Maryland Department of Natural Resources**

Oxford, MD

Closes April 11, 2022

Link: <https://www.jobapscloud.com/MD/sup/bulpreview.asp?R1=22&R2=001002&R3=0003>

The Maryland Department of Natural Resources, Fishing and Boating Services has a position announcement for a Natural Resources Biologist V (Shellfish Pathology) located at the Cooperative Oxford Laboratory in Oxford Maryland. The main purpose of this position is to identify and analyze the impact of known and emerging pathogens, parasites, and pathologies of economically and ecologically important shellfish in Maryland water.

### **Epidemiologist 3 – Aquatic Health Veterinarian**

#### **Washington Department of Fish and Wildlife**

Spokane, WA

Closes 4/26/22

Link: <https://www.governmentjobs.com/careers/washington/jobs/3491374/epidemiologist-3-non-medical-aquatic-health-veterinarian-permanent-04534>

Are you a licensed veterinarian with a passion to protect the health of fish and the public?

As our Aquatic Health Veterinarian, you will address current and emerging risks associated with fish diseases, prevalence of pathogens, and associated host response(s) (i.e., immunological changes), environmental variables that affect the disease status of fish populations, and the potential effects of disease status on human populations as it relates to zoonotic fish pathogens.

You will also provide veterinary and epidemiological support when needed to minimize health risks, improve biosecurity protocols, and collect health-based samples involving live fish, and provide comprehensive health assessments for fish populations.

### **Noreen Clough Memorial Scholarship for Females in Fisheries**

**Application deadline: May 1, 2022**

Criteria: All nominees should be a female student currently enrolled in a graduate program at a recognized institution in North America with an expected graduation date no earlier than December 2022. This does not specifically have to be a fisheries science program, but the student must demonstrate a commitment toward a career in fishery management and conservation. The student

selected will best reflect Noreen's passion and commitment to the profession and to the sport of fishing.

See attached .pdf for more information

### **Zebrafish Related Job Announcements**

<https://wiki.zfin.org/display/jobs/Zebrafish-Related+Job+Announcements>

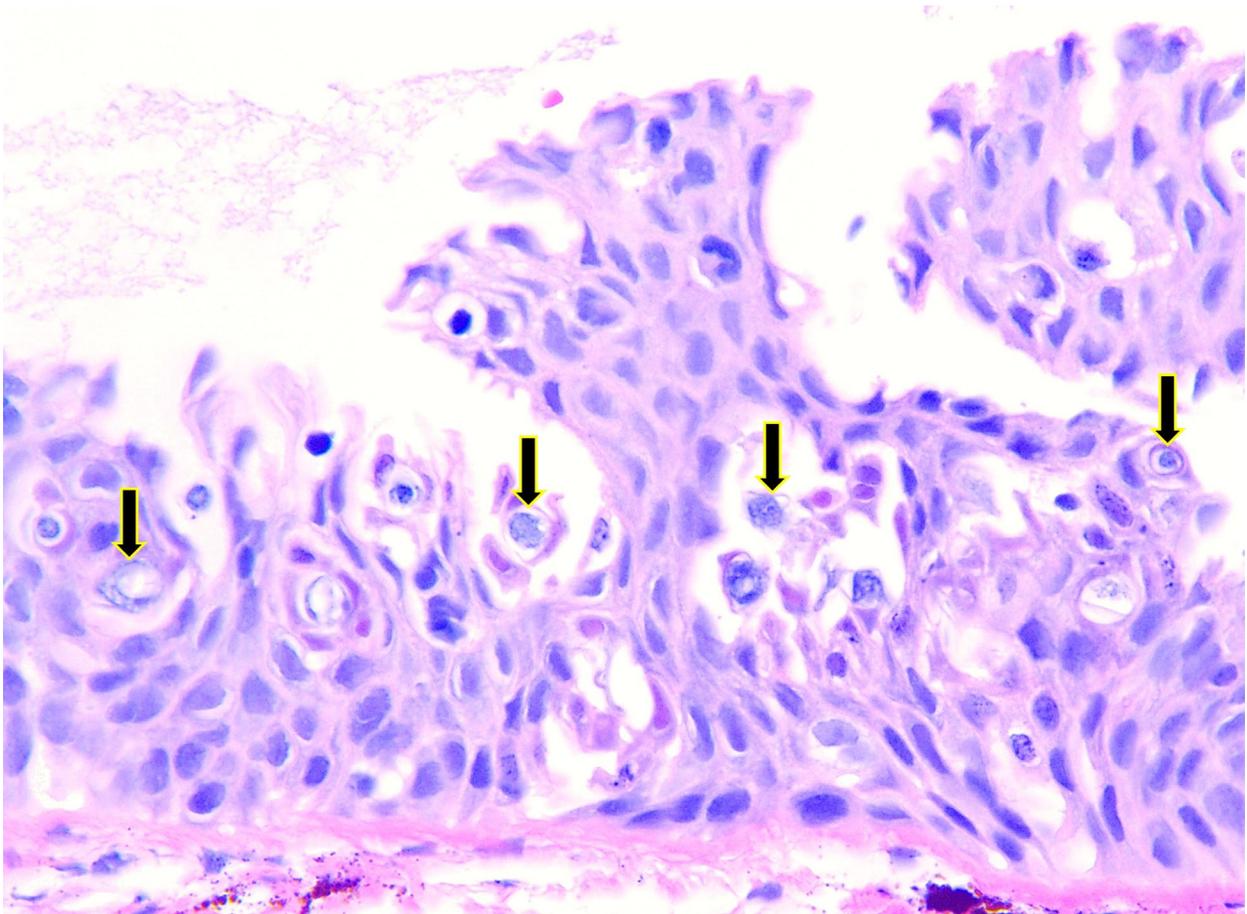
### **RESOURCES/NEWS**

**Aquatic Animal Drug Approval Partnership (AADAP) Updates are now available online (new link):** <https://www.fws.gov/library/collections/aquatic-animal-drug-approval-partnership-update>

### **AFS Job Board changes**

Check out the new AFS [Career Center](#) with new and improved features for both job seekers and employers. Job hunters now benefit from improved search functions and email alerts. While employers can peruse candidate applications and submit jobs more quickly and easily through an online submission form with a credit card payment system. Individual AFS members can still advertise for assistants and internship positions at no charge. See the AFS member employer [pricing options](#).

### **EDITOR'S RANDOM PICS**



Fin tissue of the initial infection from a live challenge with saprolegnia zoospores in Atlantic salmon -  
*provided by Aquatic Diagnostic Services - Atlantic Veterinary College*

Noreen Clough (1944-2015)

In the 1970s, Noreen was a clerical worker at the U.S. Fish and Wildlife Service. She had a degree in English, got an additional degree in biology so she could move up at the Service, only to discover that the men didn't want her moving up. "Not only did the guys not want a woman out doing field work with them, but their wives also didn't want them in the field with a woman," Clough said in a 2006 interview.

"The organization had been all male for a very long time, and biology was seen as a subject for men." She was even denied a promotion once because, according to her boss, she didn't need a promotion because she had a husband. "It was a continued uphill struggle," said Clough.

Clough did not let small minds keep her down. Early in her career she led the Interagency Work Group that oversaw the Arctic National Wildlife Refuge oil and gas assessment program and was lead author on the report to Congress. She persevered and 20 years later, became Southeast Regional Director of the U.S. Fish and Wildlife Service, the first woman to serve in such a position. She was no longer managing the logbooks. She was managing 2,000 people and a budget of \$82 million.

She later held a variety of leadership positions within the FWS in the Washington, DC headquarters, including Acting Deputy Director for External Affairs, Chief of Resource Management for the National Wildlife Refuge System and Deputy Assistant Director for Fisheries.

Clough was unflappable and persistent, no matter how much others pushed back. And she was dedicated, doing whatever it took to get something accomplished. That tenacity earned her several awards, including American Sportfishing Association Woman of the Year, the U.S. Department of the Interior Meritorious Service Award and the Coleman Outdoors Award.

Clough retired from the FWS and became B.A.S.S.'s national conservation director from 2004 to 2007 when the organization was owned by ESPN. She assisted the B.A.S.S. Nation's state conservation directors, supporting them with their issues, advocating for them to state agencies or the U.S. Congress.

She represented B.A.S.S. and bass anglers on numerous national boards involved in fisheries policy including the Sport Fishing & Boating Partnership Council, the Theodore Roosevelt Conservation Partnership, the Association of Fish & Wildlife Agencies, the Berkley Conservation Institute, the American Sportfishing Association, and the National Fish Habitat Partnership.

Although she retired from B.A.S.S. in 2007, she came back less than 5 years later following the sale of the company to a group of private investors. She returned not for the money. She came back because being involved in securing access for anglers, in eradicating invasive species, in protecting habitat for bass was important to her.

Clough spent more than 36 years in natural resource conservation but often said, "My best years have been those at B.A.S.S. It's been rewarding to see the B.A.S.S. Nation Conservation program grow and deliver amazing on-the-ground conservation and angler benefits."

Throughout her life, Noreen was an avid angler. One of her favorite extracurricular activities was serving as a member of the Michigan State University Fly Gals team, in which she mentored graduate students in sportfishing and conservation advocacy. She not only enjoyed making a difference; she liked to show others they can make a difference, too.

She put a high value on lessons learned from recreational fishing from both a resource understanding and appreciation perspective, but also from a perspective of understanding anglers and how they think and react to resource and social issues. She saw this basis as being valuable to researchers, field managers and administrators when attempting to get resource user groups to respect and understand one another and be able to work toward a common goal for the resource in a constructive manner.

Noreen passed away in January 2015 after a brief battle with pancreatic cancer, but her legacy of determination and success is an inspiration to women in natural resources conservation. In 2016 the Southern Division of the American Fisheries Society and the Black Bass Conservation Committee established the Noreen Clough Memorial Scholarship for Females in Fisheries to honor that legacy.

### **Scholarship Application Information - Application Deadline is May 1, 2022**

**Criteria:** All nominees should be a female student currently enrolled in a graduate program at a recognized institution in North America with an expected graduation date no earlier than December 2022. This does not specifically have to be a fisheries science program, but the student must demonstrate a commitment toward a career in fishery management and conservation. The student selected will best reflect Noreen's passion and commitment to the profession and to the sport of fishing.

**To Apply:** Prepare an **original essay**, no longer than 500 words, which describes why you believe you are deserving of this scholarship and how being a recreational angler is relevant to becoming a more diverse and insightful professional. Applicants may want to include career aspirations, personal interests or other relevant factors in the essay.

Additionally, please attach a current **resume** which includes:

- Full name
- Complete mailing address
- Email address
- Best telephone number
- School name and location
- Degree sought
- Expected graduation date
- Summary of your education
- Summary of work history
- Other relevant experience/qualifications/references

Applicants will be scored on the following:

- Importance of fishing in their personal life
- Quality of the essay
- Graduate study relevancy to sport fishing, either directly or indirectly
- Career goals
- Publications
- Presentations
- Involvement in professional societies

Email the essay and resume, scanned together as a single PDF file to Gene Gilliland at [ggilliland@bassmaster.com](mailto:ggilliland@bassmaster.com).