

Fish Health Section



FHS NEWS – April 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

People of the Fish Health Section: Commemorating 50 years

Dear Fish Health Section members,

This month, I am pleased to feature two more of our members, one of whom has been a member from most of our existence as a Section. I continue to seek nominations for people to profile. So far I have been able to accommodate all nominations received.

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

Greetings from **Rich Holt**. I have been a FHS member since about the mid 1970s. The FHS annual meetings have been a great place to meet people from other labs who were working on similar fish health problems and to hear recent research findings. Thanks to Dr. **John L. Fryer** at Oregon State University who gave me the opportunity to make fish health my career. The experience I gained working in his lab led to a fish health position with the Oregon Dept. of Fish and Wildlife for 31 years. A highlight was working with great ODFW fish health colleagues and hatchery personnel to reduce pre-spawning adult spring Chinook losses, which then enabled hatcheries to achieve egg production goals in the Willamette River watershed. Also, I studied the effect of water temperature on bacterial cold-water disease in salmonids and developed the culture medium TYES agar, presenting these results at a FHS meeting and a paper published. After retiring from ODFW in 2002, thanks to Dr. **Jerri Bartholomew** at OSU, I participated in a study of the impact of *Ceratonova shasta* on native salmon in the Klamath River watershed of Oregon and Northern California.



My name is **Cristi Swan** and I am the Fish Health Specialist for the Utah Division of Wildlife. I have been in my current position since 2016 but started working as a fish health microbiologist in Utah in 2007. I started my career in fish health after deciding I needed a change from working as a legal assistant in Seattle. I attended college in Washington for a few years, transferred to the University of Idaho, and there met **Ken Cain** and his group of highly motivated graduate students – **John Drennan**, **Ben LaFrentz**, and **Wade Cavender** to name a few. What chance did I have??? I was hooked! I had the opportunity to work with Wade on organizing both the 2009 (Park City) and 2019 (Odgen) Fish Health Section Annual Meetings and somewhere in between those dates became a fish health section member and certified inspector. I joined the FHS to fulfill job requirements and have stayed for the people, the collaborations and the willingness of members to share their knowledge and time. I have had the opportunity to work on some interesting projects including vaccine development, enhanced disease resistance through breeding, probiotic feed production, and mucosal immunity studies.



QA/QC Committee Update

QA/QC Committee has changed the deadline for Tier 1 and Tier 2 applications to September 1 for current and future applications. The hope is this adjustment allows most applicants to work through the busiest part of their field seasons and still have time to address applications. Please contact Wade Cavender wadecavender@utah.gov for more information.

AFS-FHS Summer Seminar Series

We are pleased to announce the AFS-FHS Summer Seminar Series is back for another year! See attached flyer.

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!

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)

Megan Shavaliier (shavali1@msu.edu)

Nick Phelps (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 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

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

The Western Fish Disease Workshop abstract submission deadline is April 30th.

The Early bird pricing for WFDW Registration ends April 30th. On May 1st, pricing increases to \$335 for the conference and \$70 for the CE session.

Please see website for additional information here <https://units.fisheries.org/fhs/wfdw/>

The link for registration is here https://apps.ideal-logic.com/cms?key=F3T9-25VWY_K9KH-5PTF_f03f64a8135b

The link for abstract submission is here https://apps.ideal-logic.com/cms?key=F3T9-25VWY_K9KH-5PTF_7377e3a2984e

9th 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) 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

PhD Student – Investigation of Infectious Salmon Anemia virus spread in farmed salmon population in Atlantic Canada

University of Prince Edward Island

Charlottetown, PEI, Canada

Closes May 2, 2022

See attached .pdf.

Veterinarian I

Northwest Indian Fisheries Commission

Olympia, WA

Closes May 3, 2022

See attached .pdf.

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.

Microbiologist GS-403-9/11

USFWS

Anderson, CA

Closes May 10, 2022

Announcement number:

R8-22-11446685-LL-DE

<https://www.usajobs.gov/GetJob/ViewDetails/649714600>

Microbiologist

This position is a Microbiologist, GS- 0403-9/11 working in Sacramento, California for the R8-California/Nevada Fish Health Center. This position is also open to status candidates under announcement R8-22-11446669-LL-MP. You must apply to each announcement separately if you wish to be considered under both recruitment methods.

www.usajobs.gov

R8-22-11446669-LL-MP

<https://www.usajobs.gov/GetJob/ViewDetails/649711500>

Microbiologist

This position is a Microbiologist, GS- 0403-9/11 working in Anderson, California for the R8-California/Nevada Fish Health Center. This position is also open to the public under announcement R8-22-11446685-LL-DE. You must apply to each announcement separately if you wish to be considered under both recruitment methods.

www.usajobs.gov

MS Position in Fish Health

Auburn University

Greensboro & Auburn, AL

Closes June 15, 2022

A Master of Science (M.S) position is available at Auburn University. The incoming student will be a Graduate Research Assistant under the guidance of Dr. Anita Kelly and Dr. Tim Bruce. Dr. Kelly's lab is located at the Alabama Fish Farming Center (AFFC) in Greensboro, AL, and Dr. Bruce's lab is located at Auburn University; both are within the School of Fisheries, Aquaculture and Aquatic Sciences (SFAAS).

This M.S. project will involve experimental field studies (~50%) and in vivo pathogen challenge trials (~50%). Specifically, this M.S. thesis research will examine improving fingerling catfish inventory control and survival upon stocking. Overall, the student is expected to conduct an independent research project followed by writing and defending a detailed thesis.

See attached .pdf for more information.

Fish Health & Welfare Veterinarian

Atlantic Sapphire Bluehouse Miami

Homestead, FL

Link: https://workforcenow.adp.com/mascsr/default/mdf/recruitment/recruitment.html?cid=8dfbf10f-7d57-4ac6-b66b-a605584d273f&cclid=19000101_000001&type=JS&lang=en_US

Zebrafish Related Job Announcements

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

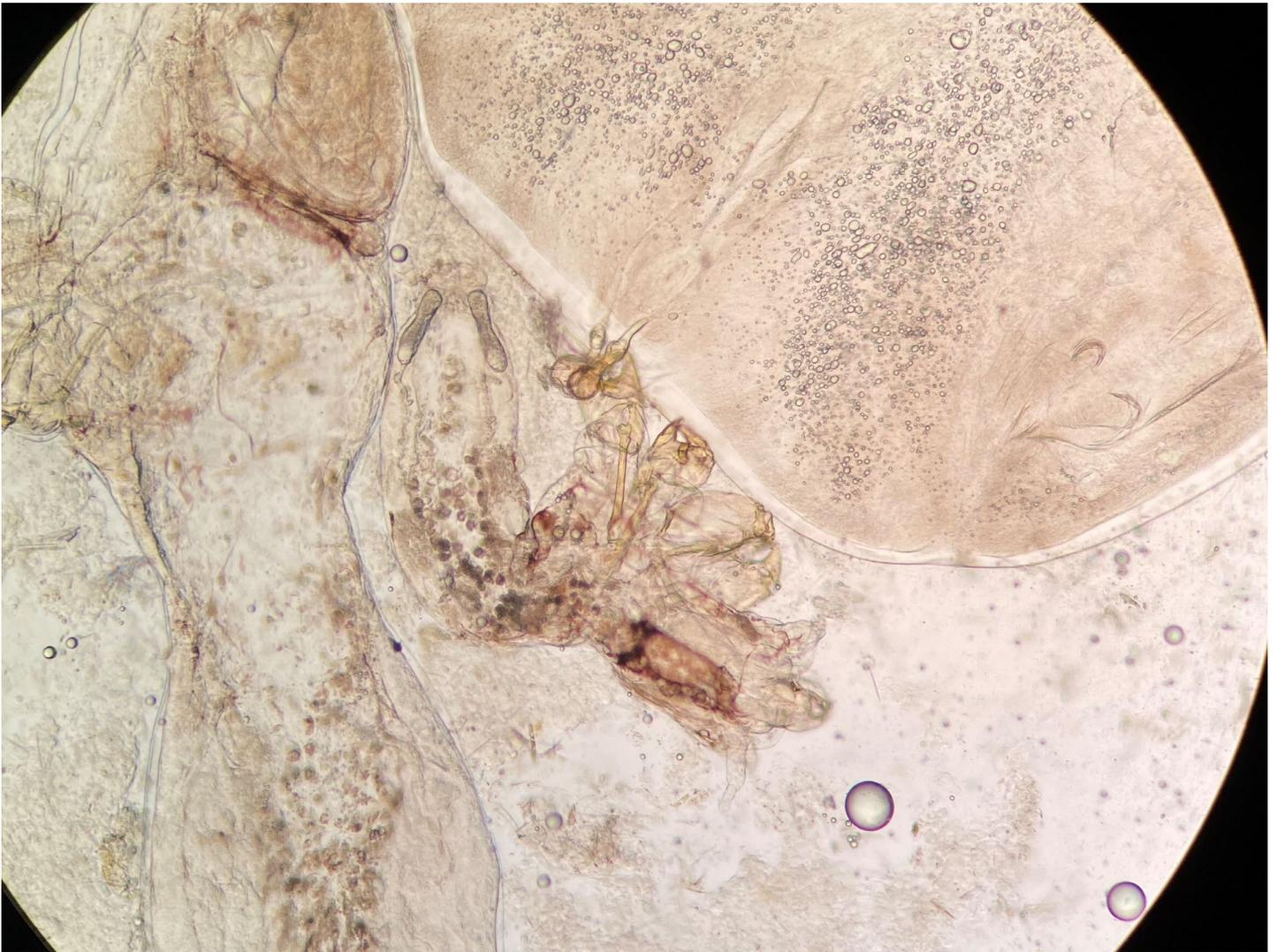
RESOURCES/NEWS

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



Smaller male (middle) *Salmincola californiensis* mating with a larger female (upper right), 100x. Lake Billy Chinook, OR, April 2022.

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.



Northwest Indian Fisheries Commission

6730 Martin Way E., Olympia, Washington 98516-5540
Phone (360) 438-1180 www.nwifc.org FAX # 753-8659

VACANCY ANNOUNCEMENT

Position: Veterinarian I
Salary: \$63,344 - \$98,284 DOQ
Location: Northwest Indian Fisheries Commission
Olympia, Washington
Closing Date: May 3, 2022

Duties and Responsibilities: Assist Veterinarian II in providing veterinary prescriptive services to tribal salmonid enhancement facilities, other facilities under contract, and tribal wildlife capture programs. Serve as the Veterinarian of Record for assigned programs and establish a valid veterinary-client-patient relationship needed to prescribe drugs. Ensure all prescribed therapeutants are applied safely and efficaciously and their use is in compliance with WA state and federal laws. Work with tribes to implement preventative strategies intended to promote fish health and reduce antibiotic use.

Qualifications: Must possess a Doctor of Veterinary Medicine obtained at a school of veterinary medicine accredited by the American Veterinary Medicine Association Council on Education. Must obtain a valid license to practice veterinary medicine in Washington State within two months of beginning work and maintain for the duration of employment. Must obtain DEA Controlled Substance Registration for Schedule 2-5, including 2N and 3N within six months of beginning work and maintain for the duration of employment. Must obtain and maintain either (1) AFS FHS certification as a Fish Health Inspector or Fish Pathologist after they have fulfilled the three years of work experience requirement or (2) the WAVMA Aquatic Animal Veterinarian Certification (CertAqV). Must possess and maintain a valid WA State Driver's License for duration of employment.

Pertinent work experience and knowledge required for this position include: epizootiology of salmonid diseases; identifying clinical signs of disease; aquatic animal medicine; federal and state drug use regulations in aquatic animals; writing veterinary feed directives and prescriptions for extra-label drug use; maintaining prescription records at a level that meets FDA and DEA requirements; culture and identification methods used for bacterial, viral, parasitic and fungal fish pathogens; Pacific salmon rearing and release strategies; water quality characteristics important to fish health in a hatchery environment; the impact of nutrition and feeds on aquatic animal health; knowledge of wildlife diseases; skill in fish and wildlife necropsy techniques; and wildlife capture techniques utilizing chemical immobilization. Must possess good interpersonal communication skills and the ability to work with individuals of varying ethnic and educational backgrounds.

Application: Send resume and cover letter by May 3, 2022 to: Wendy Bowman, HR Northwest Indian Fisheries Commission, 6730 Martin Way East Olympia, WA 98516-5540 or email to: wbowman@nwifc.org.

The Northwest Indian Fisheries Commission operates under PL 93-638 contract; **Indian Preference is an employment policy.** Must be authorized to work in the U.S. The NWIFC will not sponsor applicants for work visas.

PhD student – Investigation of Infectious Salmon Anemia virus spread in farmed salmon population in Atlantic Canada

| | |
|-----------------|---|
| Position Type | Graduate student position (PhD student) |
| Closing date | May 2, 2022 |
| Date of Posting | April 14, 2022 |
| Department | AVC – Health Management |
| Contract | Three years |
| Hours of Work | Full time student position |
| Term | Starting Fall 2022 |

The Atlantic Veterinary College (AVC) at the University of Prince Edward Island (UPEI) is seeking a highly qualified applicant for a PhD student position in **Aquatic Epidemiology** to work on a funded research project. The successful individual will join a multi-disciplinary team of epidemiologists, data science modelers, statisticians, microbiologists, and ecosystem health specialists, whose work focuses on holistic approaches to assist the Canadian and international aquaculture and fishery sector improve the productivity, sustainability, and the health of aquatic food animal stocks. This particular PhD work will focus on **investigating the within and between farm spread of Infectious Salmon Anemia virus in Atlantic Canada using statistical and simulation models.**

This PhD student assignment is expected to start in September 2022 and run for three years. A competitive stipend will be offered on a per annum basis for the duration of the assignment. Questions about the position should be forwarded to **Dr. Krishna Thakur by emailing Wendy Campbell-McKinnon (wecampbell@upei.ca).**

The selected candidate must have:

- A Master’s degree in the biological or veterinary sciences, (the exceptional and the well-motivated candidate with an undergraduate degree may be accepted but such candidate needs to register as a Master’s student at the beginning of their program)
- Interest and background in statistical and epidemiological methods
- Proficiency in at least one statistical analysis and/or scientific programming language (e.g. Stata, R, Python) is beneficial but not required
- Experience with aquatic animal diseases is desirable
- Experience of working in a multidisciplinary group with demonstrated abilities to communicate with individuals from diverse backgrounds is expected
- Must be self-motivated and able to work both independently, and as an effective partner within the team

Please submit electronically a cover letter, a resume, and reference list, a copy of transcripts, and IELTS or TOEFL score (if applicable) to be received no later than the closing date to **Wendy Campbell-McKinnon (wecampbell@upei.ca).**

In accordance with Canadian immigration requirements, all qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority. The University of Prince Edward Island is committed to gender equity in employment.

The closing date for application is May 2nd, 2022, or until a suitable candidate is identified.



M.S. Position in Fish Health

A Master of Science (M.S) position is available at Auburn University. The incoming student will be a Graduate Research Assistant under the guidance of Dr. Anita Kelly and Dr. Tim Bruce. Dr. Kelly's lab is located at the Alabama Fish Farming Center (AFFC) in Greensboro, AL, and Dr. Bruce's lab is located at Auburn University; both are within the School of Fisheries, Aquaculture and Aquatic Sciences (SFAAS).

Responsibilities and tasks

This M.S. project will involve experimental field studies (~50%) and *in vivo* pathogen challenge trials (~50%). Specifically, this M.S. thesis research will examine improving fingerling catfish inventory control and survival upon stocking. Overall, the student is expected to conduct an independent research project followed by writing and defending a detailed thesis.

Qualifications

We are looking for a motivated candidate who has:

- Bachelor's degree in the Biological Sciences
- Knowledge of aquaculture, microbiology, or fish health
- Proven ability to carry out goal-oriented work and fluent with data management systems (i.e., Excel, Word, statistical analysis)
- Lab competencies in molecular biology (e.g., nucleic acid extraction, ELISA, gene expression (RT/qPCR), protein assays) and/or microbiology (e.g., culture, identification (PCR), microbe-related assays) would be considered an asset
- Fish husbandry experience will be an asset
- Must have a valid driver's license and a car
- Must be able to swim
- Ability to work in a team laboratory setting, as well as independently

Approval and Enrollment

This M.S. graduate appointment is subject to academic approval, and the candidate will be enrolled in the M.S. program within the School of Fisheries, Aquaculture and Aquatic Sciences (SFAAS). For information about our program, please see: <http://sfaas.auburn.edu/programs-of-study/graduatestudies/>

Salary and appointment terms

This project will be carried out at the E.W. Shell Fisheries Center, situated in Auburn, Alabama (<http://sfaas.auburn.edu/e-w-shell-fisheriescenter/>) and at the Alabama Fish Farming Center, located in the heart of the catfish aquaculture industry (<https://agriculture.auburn.edu/research/faas/alabama-fish-farming-center/>). The salary (\$18,000 + fringe benefits) and appointment terms (2 yrs.) are consistent with the current rules for MSc degree students; typically, a tuition waiver is provided. The student will begin coursework and research in **August 2022 (Fall Semester)**.

Application

Please submit your application no later than **15 June 2022**. To be given consideration, applications must be e-mailed to amk0105@auburn.edu as a **single .pdf file/packet** containing all materials. The .pdf packet must include:

- A cover letter motivating the application (background, interests, goals)
- Curriculum vitae
- Contact information (e-mail and phone numbers) for three references
- Unofficial transcripts and GRE scores (refer to: <https://www.ets.org/gre>)

Further information

For further information about the project and assistantship, contact Dr. Kelly at amk0105@auburn.edu. Information on Auburn University may be found here: <http://www.auburn.edu/main/welcome/index.php>



AFS FISH HEALTH
SECTION

SUMMER

THURSDAYS, 12:00PM CST

SEMINAR

MAY 12 - AUGUST 18, 2022

SERIES

[Z.UMN.EDU/FISHHEALTHSEMINAR](https://z.umn.edu/fishhealthseminar)