



# Fish Health Section



The official link to the FHS website is: <http://www.afs-fhs.org/>

## FHS NEWS

### Change in FHS Listserv Coordinator

Please join me in thanking Jerri Bartholomew for her dedication to the FHS listserv over the past 12 years!! She has done an outstanding job, and I hope that I can continue to serve the section as well as Jerri.

I will continue to send out listserv updates on a bi-monthly basis. If you have any news, job announcements, meeting/workshop announcements, or other relevant information, please email me ([benjamin.lafrentz@ars.usda.gov](mailto:benjamin.lafrentz@ars.usda.gov)) and I will ensure that it gets included. Also, please let me know if you have any ideas or suggestions for the listserv.

Thanks again Jerri!

Ben LaFrentz

### New AFS Member Discount Available

The parent AFS is running a special for new members, which includes a 50% discount offered from January 12<sup>th</sup> to March 12<sup>th</sup>. This is a great opportunity for recruiting new members to AFS and well as to the FHS. Please forward this information to colleagues, students, young professionals, or anyone else who may be interested in joining the AFS and the FHS.

AFS.  
The Society That Made Fish Famous!  
Reach Out and AFS Someone.  
Help Engage New Members  
Share This Special

- **\$200 off** registration at the annual meeting
- **Discounted price** on all AFS journals
- **30% discount** on dozens of AFS books
- **12 free issues** of Fisheries magazine
- **Member-only access** to website features, including our searchable member directory
- **Special rates** for professional certification
- *and more!*

AMERICAN FISHERIES SOCIETY **AFS**  
Welcome to AFS  
**50% OFF**

This offer is good from  
Jan. 12- Mar. 12, 2015  
Contact [eprzygod@fisheries.org](mailto:eprzygod@fisheries.org)

50% off the regular dues price  
FOR NEW MEMBERS ONLY!

## Students and Early Career Members

We've posted a mentor profile with the new FHS listserv coordinator, Ben LaFrentz, on the blog. You can read more about Ben and his experiences here - <http://afs-fhs-students.blogspot.com/2015/01/mentor-profile-with-ben-lafrentz-usda.html>

We encourage everyone to check out our LinkedIn page ([http://www.linkedin.com/groups?home=&gid=8129129&trk=groups\\_guest\\_about-h-logo](http://www.linkedin.com/groups?home=&gid=8129129&trk=groups_guest_about-h-logo)). The goal of the page is to help fish health students and budding professionals find each other and get connected. We are hoping that this will allow students to gain mentorship from young professionals and provide a platform to post jobs, interesting questions and general ideas surrounding fish health. Hope to see you on there!

Finally, we're always looking for more members to profile on the blog. Previous profiles can be found here <http://afs-fhs-students.blogspot.com/search/label/profiles>. If you're interested in participating or have any questions/suggestions for us, please contact us at [student.section.fhs@gmail.com](mailto:student.section.fhs@gmail.com).

## Meetings, Workshops, and Courses

### **56<sup>th</sup> Annual Western Fish Disease Workshop** **Sheraton Steamboat Resort, Steamboat Springs Colorado** **June 2-4, 2015**

Please join us this year at the Sheraton Steamboat resort in beautiful Steamboat Springs, Colorado for the 2015 Western Fish Disease Workshop (WFDW) on June 2-4, 2015. The WFDW is an annual conference designed to address fish health issues affecting aquaculture and wild fish populations in the western United States, Canada, and the Pacific Ocean. Researchers, fish health professionals, veterinarians, and students come together to present current topics of interest in all fields of fish health.

Presentations cover identification, diagnostics, treatment, and management of a variety of bacterial, viral, and parasitic pathogens, and poster sessions allow students and vendors to present their current research and products in an informal setting, and an evening banquet allows individuals to network and communicate while enjoying a good meal and entertainment. The WFDW also offers RACE Continuing Education credit for fish health professionals and veterinarians.

Online registration is available at <http://tinyurl.com/mnszt2c>, and hotel reservations can be made through <http://tinyurl.com/k9jz2fj>.

See the attached PDF flyer entitled, "Western 2015 Registration" for more details on this conference, registration, the CE program, and how to submit a presentation, or contact Brandon Taro ([brandon.taro@wyo.gov](mailto:brandon.taro@wyo.gov), +1 307-766-5620 work, +1 307-399-9806 cell), or Vicki Milano ([vicki.milano@state.co.us](mailto:vicki.milano@state.co.us), +1 970-370-3015 work).

**Health and Colony Management of Laboratory Fish**  
**Mount Desert Island Biological Laboratory, Salisbury Cove, Maine**  
**August 16-21, 2015**

Applications are being accepted for this 1-week educational opportunity for individuals with maintenance, management or research responsibilities in which fish are used as laboratory animals.

APPLICATION DEADLINE - JUNE 12, 2015.

The course is offered at the Mount Desert Island Biological Laboratory, Salisbury Cove, Maine during the period of 16 - 21 August 2015. Topics to be discussed will include general system design and water quality management, anatomy and histology of fish, general fish diseases and disease management strategies. Infectious and non-infectious diseases common to all fish as well as specific diseases of importance to laboratory-maintained zebrafish will be discussed. The course will consist of lecture, laboratory exercises and discussions. During the course there will be an opportunity for students to discuss unusual and/or unsolved diagnostic case experiences from their home laboratories as problem-solving exercises. The course should be particularly valuable to technical staff, graduate students, postdoctoral fellows, junior faculty and investigators needing skills to monitor the health of a colony of aquatic organisms. The course also provides a unique educational opportunity for Residents in Laboratory Animal Medicine Programs.

For more information on the course, please see the course web site at:

<http://mdibl.org/course/hcmlf-2015/>

**4<sup>th</sup> International Conference on Members of the Genus *Flavobacterium***  
**Auburn, Alabama**  
**October 27-29, 2015**

The 4th International Conference on members of the genus *Flavobacterium* will begin on Tuesday October 27th, 2015 and end Thursday October 29th. The meeting will take place in the city of [Auburn](#), a small but thriving community in the state of Alabama and home to [Auburn University](#). Please visit the website for more information [www.flavobacterium.com](http://www.flavobacterium.com).

This conference is a continuation of previous *Flavobacterium* meetings held at Shepherdstown, WV, USA (2007), Paris, France (2009), and Turku, Finland (2012). The main focus of this conference will be on fish pathogens but there will be specific sessions dedicated to the biology, diversity, physiology, and genetics of non-pathogenic members of the genus as well as to fish pathogens of related genera such as *Tenacibaculum* and *Chryseobacterium*.

We look forward to an interesting conference with exciting presentations and exchange of ideas. We hope to see you soon in Auburn!

## Early Announcement – Salmon Disease Workshop

Dates are not yet set, but the workshop will be offered this summer at Oregon State University. If you are interested in getting on the list or have questions, please contact Jerri Bartholomew by email at: [bartholj@science.oregonstate.edu](mailto:bartholj@science.oregonstate.edu).

## 40<sup>th</sup> Annual Eastern Fish Health Workshop Charleston, South Carolina March 2 – March 6, 2015

Check us out on our Facebook page (search for Eastern Fish Health Workshop) and Like us!

<https://www.facebook.com/#!/pages/Eastern-Fish-Health-Workshop/164449723610923>

### Important Deadlines:

Call for Abstracts: closed

Abstracts Due By: past-due- get them in!

Late Registration due: now

Hotel reservations due by: 31 January 2015

Powerpoints due: 16 February 2015

We are proud to announce the 40<sup>th</sup> Annual Eastern Fish Health Workshop at the Mt. Pleasant Holiday Inn in Mt. Pleasant, SC- just over the bridge from historic Charleston, SC. Registration begins at our annual reception on Monday, March 2 from 5:00 until 7:00 PM and is followed by an evening of interesting, bewildering, and bemusing case reports. There will be three full-days of sessions (March 3 - 5), followed by a full-day continuing education course on Friday, March 6. We encourage contributions for oral presentations of case reports and research investigations that are pertinent to animal health within marine and freshwater environments.

We will be providing dinner again on Tuesday night to present this year's Distinguished Friend of EFHW and there will be an optional South Carolina Aquarium tour and dinner on Wednesday. The banquet will be on Thursday night with plenty of dancing- not to be missed!

### SPECIAL SESSIONS

1. At Some Point, I Really Need To Get Around To Publishing This: **Dave Marancik** chairs our annual opening session of baffling, bewildering, and bemusing case reports that showcase the ingenuity and smarts of some of our aquatic gurus as they deal with unusual maladies and pesky pathogens.

**Paul Bowser:** Identification Of An *Edwardsiella* Infection in Largemouth Bass In A Closed Recirculation Aquaculture System

**Lester Khoo:** When More is Actually Less – The Tale of Chronic Ammonia Toxicity

**Chris Good:** Salmon Strangeness

**Dave Marancik:** Another Rare Gram Positive Pathogen

**Jennifer Dill:** What's That Growing On Your *Halichoeres bivittatus*?

**Stephen Atkinson:** It Came From The Willamette River!

**Rod Getchell:** If You See Wigglers, Blame It On Their Diet

**Al Camus:** A Floundering Heart

2. The New Kid On The Block- **Esteban Soto** chairs a Step by Step look at some important aquatic emerging pathogens that are Hangin' Tough.

**Stephen Reichley:** Recent Advancements In Our Knowledge of *Edwardsiella piscicida* and *E. tarda*

**Matt Griffin:** Biotic and Abiotic Factors Associated with Outbreaks of an Emergent Strain of *Aeromonas hydrophila* in Catfish Aquaculture

**John Hawke:** Introducing ESZ, Enteric Septicemia of Zebrafish

**Tim Welch:** Weissellosis: An Emerging Disease of Farmed Rainbow Trout

**Tom Loch:** Emerging Perspectives On Flavobacterial And Chryseobacterial Infections in Fish

**Jennifer Dill:** Francisellosis In The Aquarium – Histopathology and Diagnostics

**Tom Waltzek:** Emerging Viral Diseases of Koi

**Al Camus:** Novel DNA Viruses Associated with Papillomatous Skin Lesions In A Giant Guitartfish *Rhynchobatus djiddensis*

3. The Empire Strikes Back- **Grace Karreman** will return to chair the second installment of a Biofilms session.

**Covadonga Arias:** Effects of Calcium and Nutrients on Biofilm Formation By Bacterial Fish Pathogens

**Chris Whipps:** What Doesn't Kill You, Will Grow In Your Biofilm: Zebrafish Facilities And The Diversity Of *Mycobacterium* Species In Biofilms

**George Sanders:** I Thought They Smelled Bad On The Outside... Routine Evaluation, Monitoring, And Sanitation Of Automatic Reverse-Osmosis Watering Systems.

**Esteban Soto:** Differential Resistance to Virkon and Bleach by Biofilms and Their Planktonic States

**Chris Good:** Attack of the Snails: Adventures in Biofilm Remediation to Reduce Off-Flavor in RAS Salmonids,

**Bill Van Bonn:** Characterization Of The Aquatic Microbiome Prior To, During And Following A Ninety-Percent Water Change In An Artificial Salt Water System

**Jill Arnold:** Monitoring Enterococcus In Public Aquarium Marine Fish Exhibits

4. Coral Health: **Cheryl Woodley** will chair this annual session that always provides up-to-date information on the health of these important animals.

**Laurie Richardson:** 'Omics Comes to the Coral World

**Chinmayee Bhedi:** We Have A Quorum, Now What Are We Saying?

**Paige Vroom:** Regeneration in Corallimorpharia

**Ryan Horricks:** Regeneration In The Caribbean Star Coral *Montastrea cavernosa*

5. East and West Side Stories: Death of a Sea Star. **Marta Gomez-Chiarri and Alisa Newton** will chair this session on the sea star epizootics occurring on both sides of the country.

**Ian Hewson:** Facing An Old Foe On New Turf: Densovirus Associated With Pacific Sea Star Wasting Disease

**Melissa Miner:** Documenting The Impacts Of Sea Star Wasting Syndrome Through Long-Term Surveys And Identifying Possible Factors Contributing To Disease Presence

**Caitlin Del Sesto:** Sea Star Wasting Disease In *Asterias forbesi* In The Northeast United States

**Alisa Newton:** Current Pathology Findings In The Pacific Coast Sea Star Wasting Disease Mortality Event

6. Catching up on Crusty Critters: **Karen Burnett** will chair a session highlighting recent research on health and disease in marine crustaceans.

**Karen Burnett:** Reading The Shrimp Transcriptome: Responses To Low Oxygen And High Carbon Dioxide

**Marc Frischer:** Molecular-Enabled Identification, Detection, and Seasonal Pattern Of The Causative Agent of Shrimp Black Gill In The Coastal Southeast USA

**Amy Fowler:** Observations Of Black Gill In White Shrimp (*Litopenaeus setiferus*) From South Carolina: Molting, Mortality, and Mobility

**Kathryn O'Shaughnessy-** Ecological Effects Of The Invading Rhizocephalan Parasite *Loxothylacus panopaei* In The Flatback Mud Crab *Eurypanopeus depressus*

**Philip Byrne:** High Level Biocontainment Regulatory Research Involving Regulated Crustacean Diseases; Health, Management, and Disease Challenges In A Laboratory Setting

**Eric Schott:** Spatially and Temporally Variable Prevalence Of A Virus Fatal To Blue Crabs

**Richard Lee:** Black Gill In Penaeid Shrimp: Pathology and Transmission Studies

7. Antibiotic Susceptibility Testing in the Aquatic Animal Diagnostic Lab. **Ron Miller** will chair this session on antibiotic susceptibility testing. Speakers will provide updates on newly standardized methods, current funded research, needed research, and how this testing can be used to provide the emergence of resistance, and extend the life-span of the few antimicrobials available in aquaculture.

**Ron Miller:** Demystifying Antimicrobial Susceptibility Testing: Resistance Does Not Always Mean Resistant.

**Esteban Soto:** The F is for Fastidious... The Challenge in Antimicrobial Susceptibility Testing for *Francisella noatunensis*.

## **General Sessions**

**Amy Rizzo-** Testing the Effectiveness of Non-Opioid Analgesics in Rainbow Trout (*Oncorhynchus mykiss*) Subjected to Anesthesia and Surgery Using Behavioral, Clinical Pathology, and Histopathology Changes

**Brianne Phillips:** Comparison Of Hematology, Plasma Biochemistry, and Blood Gas Parameters Between Two Venipuncture Sites in Southern Stingrays (*Dasyatis americana*)

**Tanya Brown:** Can Sea Anemones Remember Previous Foes?

**Catherine Frederick:** Where Are All The Sea Lice? A First Glance At Sentinel Fish In Cobscook Bay

**Jessica Piesz:** Secretory/Excretory Products Of *Lepeophtheirus salmonis* Regulate The Migration Of Atlantic Salmon Leukocytes

**Haitham Mohammed:** Black Seed *Nigella sativa* And Its Oil Extract Protects Against Columnaris Disease In Zebrafish And Catfish

**Doran Kirkbright:** Epitheliocystis: Agent Quantification And The Cell Type(s) Infected

**Marta Gomez-Chiarri:** Fight Them Using Their Own Tools (And Some Others): The Role Of Biofilm Formation On The Probiotic Activity Of *Phaeobacter gallaeciensis* S4

**Eric McElroy:** In Life And Death: The Myxozoan *Kudoa inornata* Increases Spotted Seatrout (*Cynoscion nebulosus*) Swimming Performance But Also Causes Post-Mortem Myoliquefaction

**Isaure de Buron:** *Kudoa inornata*: A Seasonal Parasite?

**Stephen Atkinson:** Hunting For The Alternate Host Of *Kudoa inornata*, A Myxozoan Pathogen of Spotted Seatrout

**Neely Alberson:** A New Snail Host Identified for *Drepanocephalus spathans* (Digenea: Echinostomatidae) In Catfish Aquaculture

**Matt Griffin:** Repetitive Sequence Mediated PCR and *gyrB* Sequence Demonstrates Intraspecific Genetic Variability Amongst *Edwardsiella ictaluri* Isolates From Different Hosts and Geographic Origins

**Ashley Haines:** Whole Genome Comparisons Of *Streptococcus parauberis* From Fish And Cattle

**Call For General Session Titles and Abstracts:** To guarantee a place on the program, please return a tentative title for your presentation via email **as soon as possible**. Do this by completing the appropriate sections of the Word attachment entitled "40 efhw title form". If you are presenting a diagnostic case, please indicate your tentative title that you would like your contribution to be included in our special session entitled: "The Aquatic Detective."

Abstracts must be submitted by **16 January 2015**. E-mail abstracts to [\*\*TheEFHW@gmail.com\*\*](mailto:TheEFHW@gmail.com). Please follow the directions for preparation of abstracts and

presentations (see attachment). Your attention to these guidelines is greatly appreciated. Power Point presentations are due by **15 February 2015**.

**Best Student Paper Presentation:** The Eastern Fish Health Workshop will present \$200 and a plaque for the Best Student Presentation. Eligible individuals must be currently enrolled in an undergraduate or graduate research program and present his/her own research. The award will be presented at our Banquet and the recipient must be present. You must register by completing the appropriate section of the "40 efhw title form" attachment.

### **Continuing Education Opportunity**

On Friday, March 6, 2015, we will offer **6** hours of RACE-approved continuing education on **Crustacean Health, Disease, and Treatment**. For only \$60, you'll get the 6 hours of CE, breakfast, and lunch. Please join us!

### **Registration**

A **\$275** registration fee (U.S. dollars) includes a reception on Monday evening, workshop proceedings, refreshments at breaks, buffet breakfasts and luncheons on each of the three days of the workshop, dinner on Tuesday night and the Anniversary Banquet on Thursday night. Make checks payable to the "Eastern Fish Health Workshop" and return payment with your registration form by **16 January 2015**. A late registration fee of **\$295** (U.S. dollars) is charged after this date. The EFHW does not accept credit cards and there are no daily or discounted registrations.

### **Lodging**

Individual accommodations must be made with the Mt. Pleasant Holiday Inn (<http://www.himtpleasant.com/>) at 1-800-972-2513. Please call the hotel and identify your affiliation with the Eastern Fish Health Workshop in order to secure the special conference rate of **\$134 + tax** per night. In order to secure your reservations, please call the Holiday Inn before **31 January 2015**. The Holiday Inn is located just over the Arthur Ravenel Bridge, a short distance to downtown Charleston, and centrally located to most local tourist destinations. It is located only about 14 miles from the Charleston International Airport. A short taxi ride to the hotel will get you there in no time!

### **Optional Wednesday Night Activity**

**Shane Boylan** and staff at the South Carolina Aquarium have kindly offered to keep the aquarium open Wednesday night and will offer small group behind the scenes tours. We'll provide dinner at the aquarium as well. Please join us for an additional cost of **\$20**. Guests are welcome; just make sure to indicate the number of people on your registration form. We will not be able to accommodate late sign-ups for this event, or refunds. If you are interested, please sign up and include the cost with your registration.

### **Optional, On-Your-Own, Pre- or Post- Meeting, things to do:**

If anyone would like some other information on the area, please let us know. There are many great things to do, including visits to The Battery, the H.L. Hunley Submarine, and



the Fort Sumter National Monument. There are also a number of beaches, plantations, and markets that are well worth a visit.

**Please let us know if you have any questions, concerns, or comments.**

**Please use the following email address for submission of title forms, registration, abstracts, and powerpoints: [TheEFHW@gmail.com](mailto:TheEFHW@gmail.com) However, if you have specific concerns feel free to email us individually.**

Thank you,

Roy, Stacey, Tom, Al, Mark, and Scott

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**JOBS**

**Lead Veterinarian/Field Operations Veterinarian**

**Department of Fisheries and Oceans – Fisheries and Aquaculture Management**

Wanted to bring your attention to a Veterinarian job opportunity with the Department of Fisheries and Oceans, Vancouver Island, B.C.

<https://emploisfp-psjobs.cfp-psc.gc.ca/psrs-srfp/applicant/page1800?toggleLanguage=en&noBackBtn=true&poster=257186&psrsMode=1>

**RESOURCES**

**Western Fisheries Science News: December 2014 - Issue 2.12**

Dear WFRC Colleagues, Partners and Friends;

Please enjoy the latest issue of our Center newsletter, designed to update you on science, new publications, events and news from the U.S. Geological Survey, Western Fisheries Research Center (WFRC). WFRC scientists conduct research on aquatic animal health; restoration ecology; and drivers of ecosystem change at six different field stations throughout Washington, Oregon and Nevada. We hope that this newsletter will help familiarize you with WFRC science and update you on our latest developments. Please forward to colleagues who may also benefit from these communications.

To subscribe (or unsubscribe) to the Western Fisheries Science News mailing list, please do so at <http://wfrc.usgs.gov/newsletter/maillist.html>

Read online: <http://wfrc.usgs.gov/newsletter/>

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**FEATURE STORY:** WFRC's Bacterial Kidney Disease Research and Its Relation to the Great Lakes Fisheries

**RESEARCH:** USGS Scientist Provides Research Update on Southwestern Willow Flycatcher Habitat Modeling

**EVENTS:** USGS Presents at First Nations Fisheries Council