

# Southern Division News



Southern Division  
of the  
American Fisheries  
Society

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Mark your calendar for upcoming professional meetings!

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## The President's Message

David Coughlan, SDAFS President

As in life, this past year for the Southern Division has had its ups and downs. The biggest 'downer' for the Division has been the hacking of our website and the resulting confusion among Chapters, Committees, Division leaders, Division webmasters, and AFS about the best way forward. No approach is simple or cheap and yours truly doesn't qualify in any way to provide meaningful assistance or guidance. Luckily, at least for

me, this fiasco has produced one of the biggest 'ups' during the year and that has been the steadfast leadership of Past-President Dennis Riecke on the resolution of this matter! Dennis has wrapped his hands around website issue and

*Pictured above members of the Arkansas Tech Student Subunit sample stream fishes using backpack electrofishing and seines during an outreach event. (Photo provided by Zach Moran)*



- Alabama
- Arkansas
- Florida
- Georgia
- Kentucky
- Louisiana
- Maryland
- Mississippi
- North Carolina
- Oklahoma
- Puerto Rico
- South Carolina
- Tennessee
- Texas
- Virginia
- Washington D.C.
- West Indian Islands
- West Virginia

Questions/Comments:

Corbin D. Hilling  
SDAFS Newsletter Editor  
chilling@vt.edu

(President's Message Continued)

has been working with Hae Kim, Dan Shoup, Brian Alford, and Beth Beard to chart a path forward. Hopefully, we'll get things back to normal very soon as Division and Chapter meetings will be upon us in early 2017. So, a large 'Thank You' goes to SDAFS and AFS stalwarts Dennis, Hae, Dan, Brian, and Beth. My apologies if I have inadvertently left someone off this list.

Effective and efficient communication among Division members is of great value, but it is of especial importance during this period of website difficulties. Luckily the SDAFS Listserve, run by Dr. Brandon Peoples of Clemson University [peoples@clemson.edu](mailto:peoples@clemson.edu), provides us with another operational means of communication. Dr. Peoples' routine and unfailing posts of conferences, assistantships, scholarships, jobs, and newsletters are a professional windfall to anyone in the fisheries field. He has been doing this for a while but I would like to recognize him as one of the brightest 'ups' of this past year. Brandon discussed with me the biggest hurdle to reaching all Division and non-Division members with this information was getting new people subscribed to the Listserve. The problems he has observed were that Universities do not allow outsiders to post to student listserves. It was concluded that the best method to encourage new subscribers was for continual reminders to come from **within** an organization. That is, fishery professors or employers should always encourage new students and employees to join the SDAFS Listserve. Please take the time to get new recruits subscribed to the SDAFS Listserve!

For me, one the biggest 'ups' was getting to represent the Southern Division on the AFS Management Committee and Governing Board. Both appointments have actually been for the last two years with Vice-president Craig Bonds taking over on the Management Committee after the Kansas City AFS Meeting. These committees are looking after the health, welfare, and professional direction of the Society and allowed me to meet and interact with some very smart and dedicated fishery professionals

from across the continent. What a great experience. Unbeknownst to me, some of the smartest individuals at the Kansas City Governing Board Meeting turned out to also be sports prognosticators from the Southern Division!



*AFS Fisheries Administrators Section President and Texas Chapter member Ken Kurzawski and SDAFS President Elect and Florida Chapter member Wes Porak subtly let me know who is going to win the 2016 World Series while at the Kansas City Royals ballpark.*

Speaking of AFS Meetings, the Southern Division has signed an MOU with the Florida Chapter to assist them with the 2017 AFS Meeting in Tampa. The Southern Division will a) donate \$5,000 to the Florida Chapter to support Meeting related activities, b) donate a tradeshow booth at the 2017 SDAFS Meeting in Oklahoma City, c) help secure sponsorships from corporations, and d) assist with soliciting Meeting symposia to be hosted by SDAFS Committees or biologists. Right now the biggest need is for sponsorships and symposia ideas. We would appreciate any help you can provide. The deadline for symposia ideas at the Tampa Meeting is January 20, 2017 so please be thinking of potential topics and hook up with any member of the SDAFS EXCOM to get your idea some traction. For all that hard work the Southern Division is slated to receive 10% of the meeting profit. If Tampa turns out to be as popular as predicted, the SDAFS could make a handsome profit and cast off our poverty status for a few years. Truth



(President's Message Continued)

be told - the Florida Chapter folks generated this fantastic idea and this was a definite 'up' during 2016! Thanks Florida AFS Chapter!

The Southern Division has been vigorously planning for many upcoming conferences and I hope you appreciate the hard work that your fellow fishery professionals have, and will, expend. Please put these dates into your electronic calendars now. First on the list is the upcoming 2017 SDAFS Meeting that the Oklahoma Chapter, led by Kurt Kuklinski, Dr. Jim Long, and a multitude of other chapter members will host Feb. 2-5 in Oklahoma City. The Florida Chapter, led by Meeting Co-Chairs Kerry Flaherty-Walia and Travis Tuten, has been actively busting butt as they prepare for the 2017 Society Meeting in Tampa. Meeting dates are August 20 – 24 and this could be a blockbuster of a meeting! The only thing that might top the exotic locale of the Tampa Meeting is a 2018 SDAFS Meeting in Puerto Rico! Meeting dates are March 7-11 and it will be our first Southern Division meeting outside the continental United States! You will hear more about this Puerto Rico adventure in the future so please stay tuned to all of our newsletter, Listserve, and website outlets.

Happy Holidays to all,

*Dave*

## 2016 SDAFS Election Results

The results of the 2016 SDAFS election this summer have been certified by Immediate Past-President Riecke and announced by SDAFS President Dave Coughlan. Each race was tight and the SDAFS EXCOM wishes to thank all of the candidates for submitting their names. 244 SDAFS members voted for Vice President and Secretary-Treasurer and 161 students voted for the Student Representative to the SDAFS EXCOM.

Amy Cottrell of Auburn University was elected as the 2017 Student Representative to the SDAFS EXCOM.

## Note from the Editor Corbin Hilling



As Sasha Doss moves on to work as a Knauss Fellow, I will be taking over as the SDAFS newsletter editor. We thank Sasha for her hard work on the newsletter and the entertaining tales of her work with New River muskellunge. Her hard work and dedication is much appreciated and we wish her the best in her new and exciting adventures.

To introduce myself, I am a Ph.D student at Virginia Tech, working under Drs. Yan Jiao and Donald J. Orth. My research focuses on management strategy evaluation of non-native Blue Catfish populations in Virginia's tidal rivers to balance tradeoffs of recreational/commercial fisheries and ecological impacts. Before moving to Blacksburg, I completed a B.S. and M.S. at West Virginia University. I look forward to helping distribute your news to the rest of the Southern Division!

Best wishes,

*Corbin*

(Election Results Continued)

Kim Bonvechio of the Florida Fish and Wildlife Conservation Commission was chosen to serve a second term as Secretary-Treasurer.

Wes Neal of Mississippi State University was elected as the incoming Vice President!

Thank you to Dan Walker, Kasey Pregler and Matthew Acre who ran for Student Representative to the SDAFS EXCOM, Mike Kaller who ran for Vice-President and Jill Hendon who ran for Secretary – Treasurer.

Congratulations Amy, Kim, and Wes! Induction ceremonies will take place at the 2017 Business Meeting in Oklahoma City, OK. See you there!

The American Fisheries Society flourishes only because of those who volunteer their time and service, whether at the state, division, or society level.

*Dennis Riecke*

2016 SDAFS Immediate Past President

## Meeting Announcements

January 24-26, 2017

February 2, 2017

February 2-5, 2017

February 22-24, 2017

March 1-3, 2017

August 20-24, 2017

March 7-11, 2018

Georgia Chapter Meeting

SDAFS Pollution Committee Meeting

SDAFS Annual Meeting

Mississippi-Alabama Joint Meeting

SC Fisheries Worker's/SCAFS Meeting

AFS Annual Meeting

SDAFS Annual Meeting

### Georgia Chapter Meeting

The 25<sup>th</sup> annual meeting of the Georgia Chapter of the American Fisheries Society will be held January 24-26, 2017 in Statesboro, GA at the Springhill Suites by Marriott. Statesboro is a city offering a vibrant energy derived from local universities and colleges, such as Georgia Southern, while still being rooted in traditions that celebrate a southern lifestyle. Abstracts for both poster and oral presentations are due by Thursday, December 1<sup>st</sup>.

The Georgia Chapter of the AFS is also excited to announce the creation of a Student Opportunity Fund. The chapter understands how important student involvement is to accomplishing the American Fisheries Society mission "to improve the conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science and promoting the development of fisheries professionals." Following the 2015 Southern Division AFS Savannah meeting, the GA-AFS began

exploring options to reinvest the meeting profits in a way that would benefit our student members and also provide opportunities to attract new membership to the Georgia Chapter. Both scholarship and travel stipend funding were discussed as important among GA-AFS members, and therefore, the **Georgia Chapter AFS Scholarship** and **Georgia Chapter AFS Undergraduate Travel Stipend** were created. Applications for both are now being accepted with a submission deadline of December 1<sup>st</sup>. For more information or to download an application, please visit our chapter website at [www.gaafs.org](http://www.gaafs.org).

SAVE THE DATE!  
2018 SDAFS Meeting  
San Juan, Puerto Rico  
March 7-11, 2018



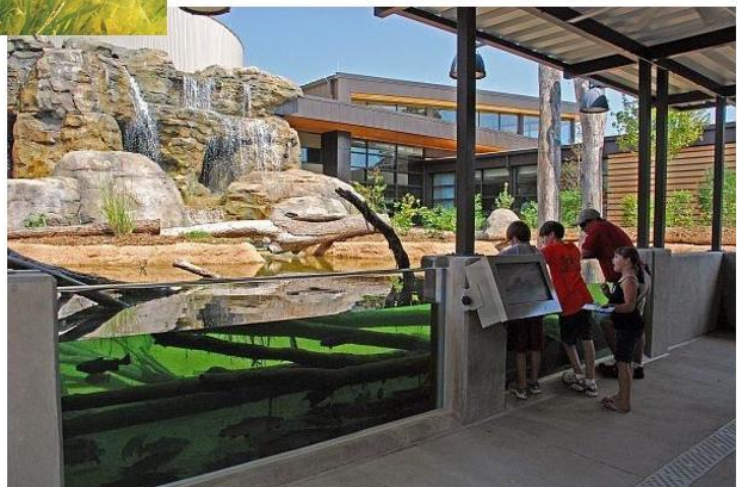
# Georgia Chapter of the American Fisheries Society

**Join Us For Our Annual Meeting in Statesboro**  
*January 24 – 26, 2017*



Expect presentations on a wide range of topics which focus on the conservation and sustainability of fishery resources and aquatic ecosystems

Areas of research include fisheries management, aquatic invasive species, aquaculture, fish health, endangered species, non-game aquatic species, fisheries ecology in the urban interface, and all coastal fisheries



***Check out our website for additional information [www.gaafs.org](http://www.gaafs.org)***

### Call for Presentations

Please email your abstracts to Carolyn Belcher ([carolyn.belcher@dnr.ga.gov](mailto:carolyn.belcher@dnr.ga.gov)) by Thursday, **December 1**  
***Follow instructions on website for submitting abstracts***



(Meeting Announcements Continued)

## 2017 Pollution Committee Meeting

### Southern Division American Fisheries Society Oklahoma City, Oklahoma February 2, 2017

The Pollution Committee of the Southern Division American Fisheries Society will be meeting at the 2017 spring meeting in Oklahoma City.



**Major agenda items:**

- Work on an update to Special Publication #30 entitled, *Investigation and Monetary Values of Fish and Freshwater Mussel Kills*

- Share information on causes, results, investigation techniques of aquatic life kills among Southern Division member agencies, organizations, and individuals; and discuss approaches towards case resolution.
- Publications are used by various state agencies and other professionals in North America
- Publication dates: 1970, 1975, 1976, 1982, 1986, 1992\*, 2003\*†
- \*in cooperation with the socioeconomics section. †incorporated freshwater mussel methods & values in cooperation with the Freshwater Mollusk Conservation Society



**Participants needed:**

- Pollution committee state representatives
- Individuals experienced with investigating kills of aquatic life
- Individuals experienced with assessing monetary values & damages for kills of aquatic life
- Individuals with experience in natural resource damage assessments

**Who we are:**

- Each state game and fish agency within the Southern Division appoints a state representative to the Committee. Any interested Southern Division member may join, or be appointed as a member-at-large.

**Major accomplishments:**

- Publication of standardized and scientifically defensible protocols for conducting fish kill investigations and assessing monetary damages resulting from these incidents.



(Meeting Announcements Continued)



## Southern Division American Fisheries Society Annual Meeting

Cox Convention Center, Oklahoma City

February 2-5, 2017

The Oklahoma Chapter invites you to attend the 2017 Annual Meeting at the Cox Convention Center in downtown Oklahoma City <http://sd.fisheries.org/2017-oklahoma-city-meeting/>. The planning committee has been hard at work to assemble a slate of workshops, symposia, talks, and poster presentations of interest to students and professionals alike. There will also be a mix of social activities to enjoy. Arrive early or stay late and take in one of the three OKC Thunder games (Wed vs the Bulls, Friday vs the Grizzlies, and Sunday vs the Trail Blazers; <http://www.nba.com/thunder/schedule>). Friday night, after the student-professional mixer, look forward to exploring Bricktown as part of the Libation Migration. On Saturday morning, the inaugural Southern Division 5 km Darter Dash will start and finish at the convention center and follow the canal through Bricktown River Walk Park to the banks of the Oklahoma River at Regatta Park. Finally, on Saturday night, participate in a banquet and live auction.

### Workshops

- [Use of Artificial Structures to Enhance Fisheries Habitat in Reservoirs](#)
- [Getting Hired – What Students Need to Know](#)
- [Leadership at All Levels in AFS](#)
- [Don't be a Statistic! – 30 years of Tips For Sampling Gear Use, Boat Operation, Swift Water, And Field Safety](#)
- [An Introduction to Graphing and Modeling using R & R Studio](#)
- [Electrofishing Principles and Applications](#)
- [Accounting for Variable Detection in Fisheries Sampling Data](#)
- [Exploring Physical Habitat Restoration and Enhancement Techniques in Streams Across the Southeast](#)
- [Emerging Topics and New Approaches to Old Issues in Pond Management](#)
- [Fish Aging Workshop](#)
- [Incorporating Human Dimensions Data into Fisheries Management Decisions](#)

### Symposia

- Best student presentation symposium
- Paddlefish: Ecological, Aquacultural, and Regulatory Challenges of Managing a Global Resource
- Gulf of Mexico States American Eel Research and Management
- Beyond the Creel: New and Enhanced Strategies for Assessing and Integrating the Human Dimension
- Biology, Conservation, And Management Of Centrarchid Fisheries In Streams And Rivers
- Finding Mutual Benefit - Competitive Fishing Tournaments and Fishery Management Agencies

### **Contributed talks and poster presentations**

Abstracts for 20-minute oral and 4'x4' poster presentations can be submitted online through **December 2, 2016** the Conference Exchange available through this link:

<https://afs.confex.com/afs/sd17/cfp.cgi>

Abstracts should be less than 250 words and presenters will be able to select if they are part of a planned symposium or if students want to be considered for inclusion in the Best Student Presentation Symposium. Abstracts will be accepted through **November 18, 2016**.

### **Registration**

Registration for the meeting is now available by going online to

<http://sd.fisheries.org/meeting-registration/>. Discounts are available for AFS members and students in addition to those registering early. Early registration ends **January 16, 2017**.

- AFS Member Early Bird - \$200
- AFS Member Late - \$280
- Non- Member Early Bird - \$290
- Non- Member Late - \$370
- Student Early Bird - \$80
- Student Late - \$100

### **Lodging**

The official hotel for the meeting is the **Renaissance Oklahoma City Convention Center Hotel**, 10 N Broadway Ave, Oklahoma City, OK 73102. Rooms are available for the conference at the rate of \$159/night.

The link to book online is at the meeting website <http://sd.fisheries.org/spring-2017-meeting-details/> or call **1-800-859-6877** and request the "SDAFS group rate"

### **Planning Committee**

If you have any questions, feel free to reach out to one of the members of the planning committee.

**Meeting Chair** – Kurt Kuklinski, [kurt.kuklinski@odwc.ok.gov](mailto:kurt.kuklinski@odwc.ok.gov)

**Program Chair** – Jim Long, [longjm@okstate.edu](mailto:longjm@okstate.edu)

**Symposia Chair** – Jason Schooley, [jason.schooley@odwc.ok.gov](mailto:jason.schooley@odwc.ok.gov)

**Posters Chair** – Steve O'Donnell, [steve.odonnell@odwc.ok.gov](mailto:steve.odonnell@odwc.ok.gov)

**Workshops Chair** – Dan Shoup, [daniel.shoup@okstate.edu](mailto:daniel.shoup@okstate.edu)

**Student Affairs Chair** – Nicole Rankin, [Nicole\\_rankin@fws.gov](mailto:Nicole_rankin@fws.gov)



**Registration Chair** – Bill Wentroth, [bill.wentroth@odwc.ok.gov](mailto:bill.wentroth@odwc.ok.gov)

**Fundraising Chair** – Ken Cunningham, [kenneth.cunningham@odwc.ok.gov](mailto:kenneth.cunningham@odwc.ok.gov)

**Local Arrangements Chair** – Barry Bolton, [barry.bolton@odwc.ok.gov](mailto:barry.bolton@odwc.ok.gov)

**Technology Chair** – Don Groom, [don.groom@odwc.ok.gov](mailto:don.groom@odwc.ok.gov)

**Meeting Webmaster** – Nathan Copeland, [copeland@gaiagps.com](mailto:copeland@gaiagps.com)

Keep checking the website <http://sd.fisheries.org/2017-oklahoma-city-meeting/>

for updates, including a schedule of events. We look forward to hosting the meeting and seeing you in OKC!



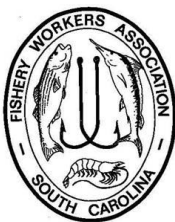
## Mississippi-Alabama Joint Meeting

The Mississippi and Alabama Chapters of the American Fisheries Society are co-hosting a joint meeting that will start on February 22<sup>nd</sup> and run through February 24<sup>th</sup>, 2017. The meeting will be held at the IP Casino and Resort in Biloxi, MS. The meeting will include a full slate of presentations on Thursday and Friday from students and professionals ranging on topics from freshwater and saltwater

fisheries management and conservation, non-game species, aquatic vegetation control, aquaculture, imperiled species and much more. Business meetings for both chapters will occur on Friday after the presentations have concluded, which will also include the presentation of student awards. More details in regards to registration and abstract submission will be forthcoming. For more information, co-chairs

for the meeting are Jerry Brown ([jerrb@mdwfp.state.ms.us](mailto:jerrb@mdwfp.state.ms.us)) and Steve Rider ([steve.rider@dnr.alabama.gov](mailto:steve.rider@dnr.alabama.gov)), who can be reached for further questions and inquiries.





**20<sup>th</sup> ANNIVERSARY OF THE JOINT ANNUAL MEETING**

*of the*

South Carolina Fisheries Worker’s Association

*and the*

South Carolina Chapter-American Fisheries Society

Hickory Knob State Park

McCormick, SC

<http://www.southcarolinaparks.com/hickoryknob/introduction.aspx>

Wednesday - Friday, March 1-3, 2017

**Registration Information**

Please complete the registration form at <http://scafs.org/> and return with your payment to C. Michelle Willis.

**For those who require lodging, registration forms and payment for both registration and lodging MUST be received by January 13, 2016.** If you are presenting at this year’s meeting, you must be registered before you may be added to the program. Payment accepted in the form of cash or check. If paying by check, make payable to “SCFWA”.

**Attention:** C. Michelle Willis, SCDNR, 217 Fort Johnson Road, Charleston, SC 29412

**Email:** [secretary@scfwa.org](mailto:secretary@scfwa.org) **Fax:** 843.953.9820 **Phone:** 843.953.9054

Registration Includes	Registration Does Not Include
Life History Workshop	Lodging
Meeting Presentations	SCFWA Dues (\$5)
2 Breakfasts	SC-AFS Dues (\$5)
1 Lunch	Additional Social Ticket (\$20)
2 Dinners	
Break Refreshments	
Poster Mini-Social	
Grand Social	

**Lodging**

We have reserved lodge rooms at Hickory Knob State Park that are available on a first-reserved, first-served basis. Each lodge room contains two double beds, one bathroom, and cost \$60 per night (<http://www.southcarolinaparks.com/hickoryknob/lodging.aspx>). To reserve a lodge room, indicate your request on the registration form below and list your requested roommate(s), if applicable. **Submit registration form and payment by January 13, 2016 to secure lodging.**

See [www.scfwa.org](http://www.scfwa.org) and [www.scafs.org](http://www.scafs.org).

## Goodbye Kansas City, Hello Tampa!! AFS 2017 Meeting Planning Update



### AMERICAN FISHERIES SOCIETY 147TH ANNUAL MEETING TAMPA, FLORIDA 2017

We are officially in the home stretch for planning the 2017 American Fisheries Society Annual Meeting in Tampa! Leading up to the meeting in Kansas City in August, Florida Chapter members and AFS staff worked together to finalize the budget and get promotional items ready for our booth at the trade show. Here is a summary of our accomplishments:

- Finalized and approved budget thanks to Kevin Johnson (Budget and Finance Chair) and Dan Cassidy (AFS)

- We signed a memorandum of understanding with AFS and the Southern Division detailing our responsibilities from here on out. The Southern Division has agreed to help obtain major sponsorships, donate \$5,000 towards the meeting, and give us a booth at their meeting in Oklahoma City to promote the Tampa meeting; in return, they will receive a portion of the proceeds from the Tampa meeting.

- Promotional items were obtained from Visit Florida and Visit Tampa, and the Florida Chapter provided coozies and posters with the 2017 meeting logo, both of which were highly sought after during the tradeshow!

- Our tradeshow booth was a great success! Kylie Briody from Visit Tampa manned the booth throughout the trade show, and Florida Chapter members joined her in shifts at the busiest times.

- Our website is live thanks to Eric Sawyers (Webmaster), check it out at <http://afsannualmeeting.fisheries.org/>

- The General Co-chairs (Kerry Flaherty-Walia and Travis Tuten) got over some jitters, survived their faces being on the “jumbotron”, and gave an enthusiastic pitch to come to Tampa at the business meeting in Kansas City. We also presented a promotional video scripted by Florida Chapter committee members. It is posted on the meeting website and stars our very own Florida Chapter President, Andy Strickland!

- Many great contacts were made by the Florida Chapter committee members in attendance over beers and carp hot dogs, and several of us participated in the hand-off meeting with the Missouri Chapter. To just mention a few, Linda Lombardi (Registration chair) shadowed the registration folks to get a handle on the system, Chris Bradshaw (Audiovisual chair) got a rundown on procedures from the AV company, and Kathy Guindon (Fundraising Chair) made lots of contacts for new sponsorships. For a full list of committee chairs, see the meeting page.

Thanks to all that attended the Kansas City meeting and have helped over the last few months in varying capacities. It was a whirlwind, and will continue to be for the next year. On September 21, the Program Committee participated in a tutorial of the Confex system that is





used to manage submissions, and due dates for symposia (January 20, 2017) and abstracts (March 17, 2017) are posted on the meeting website. Conference calls with AFS will also be occurring monthly until the meeting. As always, if you are interested in getting more involved (especially fundraising), please contact us!

Kerry Flaherty-Walia ([Kerry.Flaherty-Walia@MyFWC.com](mailto:Kerry.Flaherty-Walia@MyFWC.com)) and Travis Tuten ([Travis.Tuten@MyFWC.com](mailto:Travis.Tuten@MyFWC.com))  
2017 General Meeting Co-Chairs

## Workshops

The Aquaculture America 2017 Steering Committee and the US Aquaculture Society's Continuing Education ad hoc Committee are pleased to announce two workshops to be held in conjunction with Aquaculture America 2017. These workshops are valuable training opportunities for USAS students, members and conference attendees. USAS students and members receive significantly discounted registration rates. The workshops will be held on February 18 or 19, 2017, before the annual conference on February 19 - 22, 2017 in San Antonio, TX. For more information or to register for the meeting or workshops, see:  
<http://www.was.org/meetings/default.aspx?code=AA2017>

The LEAN Workshop (February 18, 2017) is presented by Terri Lawrence of Collaborative Impact Consultants. LEAN "is a customer-centric methodology used to continuously improve any process through the elimination of waste in everything you do." It is a Japanese approach to management that focuses on cutting out waste. It can be used for manufacturing, management and production. Participants have found these workshops extremely valuable and producers are encouraged to attend.

The Water Quality Workshop (February 19, 2017) is presented by Claude Boyd of Auburn University, and Chris Good of The Freshwater Institute. Dr. Boyd will give a general overview of the critical need to monitor water quality/chemistry, while Dr. Good will share his expertise of water quality/chemistry in Recirculating Aquaculture Systems (RAS). Both presenters have been instructors with workshops such as this around the world. Participants from academia, extension and producers are encouraged to attend.

Please see the flyers of each workshop at the end of the newsletter for more in-depth descriptions.

Thanks!

Mike Denson, Kathleen Hartman, Dave Straus and Paul Zajicek

Aquaculture America 2017, Steering Committee

# Chapter Updates

## Arkansas Tech University Subunit

The Arkansas Tech Fisheries and Wildlife Society has been involved in a myriad of activities over the past six months. For simplicity, we have broken them down into four categories of involvement; 1) Conservation, 2) Education, 3) Research, and 4) Subunit Recruitment.

1) Conservation is an enormous task often requiring massive input from volunteers and user groups to improve fish and wildlife resources. The Arkansas Tech subunit has done its part on several occasions by volunteering over 500 hours with habitat restorations at Bearcat Hollow Wildlife Management Area, Bona-Dea Wildlife Sanctuary, and with the Army Corps of Engineers on Lake Front Drive. We also assisted with the Arkansas River Valley Chapter of the Forever Quail Initiative, helping with their shooting events and fundraisers. We also had representatives at a Dive against Debris underwater trash clean up on Greer's Ferry Lake.



Debris recovered from an underwater trash clean up conducted by the Arkansas Tech Student Subunit

2) The Arkansas Tech subunit has been proactive in education of the public by volunteering at Holla Bend National Wildlife Refuge's annual "Bowjam", and at Russellville High School biology field. At these two respective events, we taught bow safety to all age classes of children, and taught Advanced Placement classes about freshwater fish and common sampling techniques. We also held two educational field days this past fall where graduate students taught over 40 undergraduate students how to sample fish assemblages using seine nets and backpack electrofishing, identify mammal species, trap exotic species, and sample reptiles and amphibians. Four graduate students attended the National meeting of the American Fisheries Society. We hope to have five grad students present at the upcoming SDAFS meeting, and to have multiple undergraduates attend as well.

3) Several members of the subunit have been actively involved in both graduate and undergraduate research. Nearly half of our subunit has been involved with research on Paddlefish movement, efficiency of chase boats for sampling Blue Catfish, predation on White and Black Crappie by piscivorous predators, genetically describing Eastern Fence Lizards, and Feral Cat ecological impact studies. Several of our members have received internships with the Army Corps of Engineers, Arkansas Game and Fish, and Arkansas Conservation Police Officers. With multiple incoming freshman applying for technician jobs, we hope to continue our subunit involvement with professional research of

fisheries and wildlife.



Arkansas Tech students show off some impressive largemouth bass collected while electrofishing

- 4) We have been successful in recruiting undergraduates into the society through bi-monthly meetings. We have had several socials including our annual “Beast Feast” where the public is invited to dine on a cornucopia of elk steaks, quail breast, braised raccoon, and coyote fajitas. At this event, we had over 120 people attend, and raised over 2,000 dollars for the society. We will also be joining the University of Arkansas chapter of the AFS for a LSU vs U of A football game on November the 12<sup>th</sup>.

Another announcements pertaining to our society:

- 1) We will be having officer elections within the next week.
- 2) We recently designed new t-shirts for the society
- 3) Jacob martin received the Arkansas Game and Fish Scholarship



Arkansas Tech students out in the field

I cordially thank you for taking the time to reading this report from our subunit, and wish you a good day.

Best,

Zach Moran

## Mississippi State University Subunit

The AFS student subunit at Mississippi State University has continued to promote strong communication and development among not only fisheries students and current professionals at MSU, but also the university and community within the state Mississippi. Student members have taken full advantage of the opportunities available to them in becoming well-rounded fisheries professionals. Members gained valuable experience in stream-side electro-fishing, fish phlebotomy techniques, fish tagging methods and experimental design while assisting in ongoing research projects at Mississippi State University. Further development of skills within the realm of fisheries science and management were attained during stream ecology and boat-maintenance workshops.





Starkville Halloween costume carnival 2016

Participation in community outreach programs has been well received, and included activities focused on providing opportunities for MSU students, faculty and the public to learn about the importance of conserving natural resources. Assistance was provided by subunit members at the Mississippi State University Wildlife and Fisheries Summer Camp. Fish and water quality sampling techniques were demonstrated to further the education of the students who participated. Student members provided service at the 2016 Starkville Halloween costume carnival where children and parents took part in a magnetic fishing game designed to educate and encourage catch and release fishing techniques. Members also lead and participated in Youth Fishing Derbies at Sam D. Hamilton Noxubee Wildlife Refuge. Youth were provided with fishing tackle and

bait, and showed proper approaches and techniques to use while fishing.



Subunit trip to Tishomingo State Park in Mississippi

Additional activities are planned for the rest of 2016 and 2017. The subunit's annual "Fish Dish Competition" is currently being planned, and requires competitors in the event to provide an aquatic based dish to be judged for a prize. For the last five years, the event has served as both a fundraising opportunity as well as a way to raise awareness for the vast array of aquatic resources we need to protect. The subunit will also be providing a fisheries techniques workshop at the Wildlife Society Annual Southeastern Student Conclave in 2017.

Our members continue to pursue and provide information necessary for future conservation of aquatic resources. A number of graduate and undergraduate members within the subunit presented or plan to present a number of poster and oral presentations at 2016-2017 meetings at all levels of AFS. Further information on

the subunit as well as upcoming events can be found on our website at [msuafs.org](http://msuafs.org).



Subunit was well attended at the National AFS meeting in August, and had good participation at

## North Carolina State University Student Subunit

As the new semester starts, students in North Carolina State University's (NCSU) Student Fisheries Subunit (SFU) gear up to tackle a new year of learning and outreach. After winning Southern Division American Fisheries Society Best Student Subunit in 2015, our SFU has big goals for this coming school year. Our SFU has just elected the new sub-unit executive team and we are looking forward to what they have planned. This year we will seek to promote the exchange of fisheries and aquatic knowledge among individuals and benefit the community surrounding our school.

To kick off the semester, several of our members attended the Annual Meeting of the American Fisheries Society in Kansas City, MO. NCSU was well represented, and in addition to giving presentations, networking, attending talks and section meetings, our attendees managed to sneak a taste or two of KC's famous barbecue (nope, they got nothing on NC...). Former SFU president Casey Greishaber won the Best Student Presenter award for her talk about her research in the Yadkin-Pee Dee River, "Relation of Intersex and Fish Health to Contaminants in Riverine Fishes". Overall, the meeting was a great

success, and our SFU is looking forward to Tampa in 2017!



Some of the Wolfpack gathered for a photo after the business meeting. From left to right. First Row: Anakela Popp, Casey Grieshaber, Tiffany Penland. Second Row: Tom Kwak, Wilson Laney, Jim Rice, Brendan Runde, Jesse Fischer, Tomas Ivasauskas, Derek Aday, Gus Engman. Photo: Tom Kwak.

Outreach in the community is a key way we engage and promote service among members. Recently, our SFU volunteered at the Harvest Festival at Historic Yates Mill Park near campus. This event featured cane pole fishing for children and families. The children enjoyed fishing off the dock and our students appreciated the chance to serve the families in our community. Many a first fish was caught! Our members also assisted with National Hunting and Fishing Day at Lake Raleigh, located in the heart of our campus. Children and kids at heart practiced their casting abilities with the Backyard Bass game, then put their skills to the test fishing off the docks. These outreach events give our members a chance to put their communication and volunteer skills to use.





A new angler gets a little help taking her first fish off the line.

Sharing the knowledge we gained from our education is also another fundamental our SFU. This year we again participated in the Shad in the Classroom Program. Our members travelled to participating schools throughout North Carolina and taught 670 students in 24 classrooms, from kindergarten to high school, about fish ecology and physiology with a hands-on dissection. Each year our members love sharing our knowledge of fish to eager young students. Their curiosity examining and learning about the shad specimens is something none of our members want to miss. This is the third year our SFU has assisted with the in-class dissections.

This spring our SFU hosted a Project WET workshop to give our members an opportunity to further develop education and outreach skills. Attendees were trained in the Project WET curriculum and learned techniques for effective teaching. To continue this training, our SFU has planned an Aquatic WILD training this fall.



SFU member Enie Buhler helps students with a dissection.

Not only does the NCSU subunit participate in outreach and educational opportunities but we also like to have fun! This summer was the second annual Snorkelpalooza in Western NC. Members camped, snorkeled, fished, and soaked in the beauty of NC's mountain streams. This year, we were joined by members from the North American Native Fishes Association, who were more than happy to share their knowledge and enthusiasm.

Conservation is a core aspect of our SFU. Each semester, we organize a stream clean-up for Rocky Branch Creek, which runs through the middle of NCSU's campus. This is a fun event that allows us to get outside and clean up our city. We pull out garbage bags full of Styrofoam, tennis balls and plastic water bottles. This event helps beautify our campus and brings us together as a club.

Finally, NCSU SFU has a new website! You can now find us at [ncsusfs.wordpress.com](http://ncsusfs.wordpress.com). Stay tuned for more updates about meetings, outreach activities, and fishy fun! NC States SFU is thankful for the continued support from SDAFS and professionals. We continue to seek new ways to make our club flourish. Our enthusiastic members, support from the community, and fresh new officer team will continue to fuel our club's impact on NC State's campus.





SFS members dressed up for last year's Halloween stream clean up.

## Potomac Chapter

The Potomac Chapter held its annual crab feast on Saturday, October 15. The event, held at AFS headquarters in Bethesda, Maryland, was co-sponsored by the AFS Fish Habitat Section and the American Institute of Fishery Research Biologists. The crab feast was attended by about 20 students and professionals from the Washington, DC area, the Maryland Eastern Shore, and Baltimore. The event raised \$120 to support student travel fellowships to the AFS annual meeting. And the crabs and company were delightful!



Members of the Potomac Chapter enjoy the annual crab feast in Bethesda, Maryland

## Virginia Tech Chapter

The Virginia Tech Chapter of AFS has beefed up its agenda this semester, adding four new outreach and volunteer events to their schedule in the first few months of the school year. First up was the "Mini-Mudbass" Fishing Day, where our members hosted a mini fishing "derby" on the Duck Pond for about 15 students from the on-campus preschool, VT CDCLR. The event, held on September 14th, was intended to teach these 4-year-old students about the joys of outdoor recreation and fishing. We supplied all rods, bait, and tackle for the kids and provided one-on-one instruction. We also kept all of the fish landed, as well as other fish which we previously shocked with a backpack shocker, in display tanks for the students to see. The event was a hit, and we look forward to hosting next year's cohort of preschoolers out on the campus pond.

Just ten days later, VTAFS was at it again, this time partnering with Virginia AFS Chapter president and USFS fisheries biologist Craig Roghair. Together we conducted an educational event for members of the American Heritage Girls at Glen Alton Farm in Ripplemead, Virginia. The event was organized for the girls to earn a "biology badge" as part of their club membership. Together with Mr. Roghair, we taught over 20 girls about 1.) stream habitat types (pools, runs, and riffles), 2.) local fishes and their physical adaptations to these stream habitat types, 3.) macroinvertebrate identification and brief life history, 4.) the creation and use of dichotomous keys, 5.) basic watershed dynamics, and 6.) how to prepare for a career in fisheries conservation. Although plenty of fish were on display, the crowd favorite was undoubtedly the red-spotted newt. After all the excitement surrounding that little guy, AFS members will be brushing up on their amphibian knowledge before attending the next biology badge day!



VTAFS members collect fish for an outreach event at Glen Alton Farm in Ripplemead, Virginia

On September 29th, VTAFS invited VDGIF fisheries biologist John Copeland to give a presentation to interested members of the Virginia Tech community entitled, “A Life Well Lived: There’s More to Life than Work and There’s More to Fisheries than Technical Skills.” The Virginia Tech Chapter would like to extend our thanks to John for his talk, which was a fitting way to end the first round of exams for most of our members. We look forward to having him back in the future.

A couple weeks later on October 14th, VTAFS participated in an outreach event focused on introducing students from Blacksburg Middle School to the ecology and diversity of stream fishes. Three Virginia Tech graduate students and Dr. Emmanuel Frimpong sampled fishes from a stream near Pandapas Pond and provided a hands-on demonstration for the students.

We then welcomed Dr. Pat Mazik from the Cooperative Fish and Wildlife Research Unit at West Virginia University on October 19th. Dr. Mazik gave a talk to VTAFS members entitled, “How to Get a Job in Fisheries.” Mazik’s passion for educating and inspiring college students shined through in her talk,

and we would like to thank her for travelling down to visit us. We look forward to hosting her again in the future.

Over the course of the next few weeks, VTAFS members volunteered over 50 hours of their time to assist VDGIF with their annual gillnetting survey of Claytor Lake. Members help set and pull gillnets, measure and weigh fish, and extract otoliths from captured fish. According to John Copeland, a VDGIF fisheries biologist, the annual gillnetting survey would not have taken place this year if VTAFS members and VDGIF Complimentary Work Force volunteers hadn’t stepped up to the plate. The chapter extends its offer to help on the project in future years, as members young and old gained plenty of valuable field experience along the way.



SDAFS Webmaster and VTAFS President Hae Kim shows members of the American Heritage Girls group a Brook Trout

VTAFS is also currently planning its 34th Annual Mudbass Fishing Classic. Our largest event of the year, the event invites local youth to participate in a recreational fishing derby on the Duck Pond on Virginia Tech’s campus. Having been awarded a grant for the project by VDGIF, our chapter will be sending participants home with a rod and reel combo of their own, as well as participation prizes generously donated to us by local sponsors. We are planning to host the event on Saturday, April 29th from 10:00 A.M. to 1:00 P.M., though the specific day and time has yet to be made official.



# Student and Employment Opportunities

## Student Opportunities at SDAFS 2017

### Free Student Rooms at the 2017 SDAFS Spring Meeting

The Southern Division of the American Fisheries Society supports a limited number of complimentary hotel rooms for students attending the 2017 SDAFS Spring Meeting (February 2 - 5) at the Renaissance Oklahoma City Convention Center Hotel in Oklahoma City, OK. Rooms are available for 2 nights (February 3 and 4). In order to be considered for a free room, students must be a current AFS member and volunteer to assist the Oklahoma Chapter during the 2017 SDAFS Spring Meeting. Students interested in these rooms should contact Nicole Rankin ([nicolemrankin@gmail.com](mailto:nicolemrankin@gmail.com)), the Chair of the Student Affairs Committee. Students receiving complimentary hotel rooms will be notified by January 4, 2017. If interested, please send Nicole an email that includes your name, complete mailing address, email address, phone number, university affiliation, current degree track (BS, MS, PhD) and your gender (so that appropriate room assignments can be organized).

### Student Mentor Lunch at 2017 SDAFS Spring Meeting

The Southern Division of the American Fisheries Society encourages interaction between students and fisheries professionals through a Student Mentor Lunch. The Student Mentor Lunch at the 2017 SDAFS meeting will occur at noon on Saturday, February 4. If you are a student interested in being paired with a mentor for lunch that day, please indicate your participation by making the appropriate selection on the registration form. You may also send an email to Nicole Rankin ([nicolemrankin@gmail.com](mailto:nicolemrankin@gmail.com)), the Chair of the Student Affairs Committee, stating your interest. We

will try to match students with mentors that can offer specific career advice. If you email Nicole, please indicate what school you attend, the degree you are working towards, and whether you would prefer a mentor from an Academic Institute, State Agency, Federal Agency, or Private Firm.

### Best Student Presentation and Best Student Poster Awards

The Southern Division of the American Fisheries Society supports awards for Best Student Presentation and Best Student Poster at the annual SDAFS meeting. Students interested in competing for the Best Student Presentation and the Best Student Poster at the 2017 SDAFS meeting should indicate so with their abstract submission. Finalists for the Best Student Presentation will be selected based on submitted abstracts and notified prior to the meeting. Each selected finalist will be required to give his or her presentation in the Best Student Symposium on Saturday, February 4. Submissions for Best Student Poster will be judged during the Poster Session on Friday, February 3. Abstract submission deadline is December 2, 2016.

## Noreen Clough Memorial Scholarship for Females in Fisheries

In memory of Noreen Clough's contributions to the field of fisheries management and conservation as well as her trailblazing as an early female leader in the American conservation community (<http://www.bassmaster.com/blog/remembering-noreen-clough>), her friends and colleagues have established a memorial scholarship in her name (<http://sdafs.org/students/cloughscholarship/>).



This \$1,000 scholarship will be awarded at the Southern Division, American Fisheries Society meeting in Oklahoma City in February, 2017 to a deserving student. We hope to notify the winner in advance of the meeting to accommodate travel planning.

### Criteria

All nominees should be a female student currently enrolled in a graduate program at a recognized institution. This does not specifically have to be a fisheries science program, but the student must demonstrate a commitment toward a career in fisheries management and/or conservation. The student selected to receive this award will be the applicant that best reflects Noreen's passion and commitment to fisheries conservation and management.

### To Apply

Prepare an essay, no longer than 1,000 words, which describes why you believe you are deserving of this scholarship. Applicants may want to include career aspirations, personal interests or other relevant factors in the essay. Additionally, please attach a current resume which includes 1) full name, 2) complete mailing address, 3) e-mail address, 4) best telephone number, 5) school name and location, 6) degree sought, 7) expected graduation date, 8) summary of your education, 9) summary of work history, and 10) other relevant experience/qualifications/references.

Please e-mail the essay and resume, scanned together as a single PDF file to:

Gene Gilliland

B.A.S.S. Conservation Director

ggilliland@bassmaster.com

### Deadline

Completed applications must be received by December 15th, 2016.



Noreen Clough, Photo from  
Bassmasters.com

## Assistant Professor, Towson University

**Assistant Professor, Microbiology  
Department of Biological Sciences  
The Jess and Mildred Fisher College of Science and  
Mathematics  
FCSM-N-3017**

### Position:

The Jess and Mildred Fisher College of Science and Mathematics invites applications for a tenure-track, 10-month Assistant Professor position in the Department of Biological Sciences beginning August 2017.

### Qualifications:

PhD, postdoctoral experience preferred. ABD applicants considered, but appointment will be at the Instructor rank and all degree requirements must be completed by February 1, 2018. Possess a strong commitment to excellence in teaching a diverse student population, to develop a

productive research program involving both graduate and undergraduate students, and to pursue external funding to support the applicant's research program. Preference given to applicants with experience in microbiome/genome research and bioinformatics.

**Responsibilities:**

Faculty assigned an instructional workload of six (6) course units per academic year for the first year. Beginning the second year the workload reverts back to the standard instructional workload of seven to eight (7-8) course units per academic year. Teach courses in microbiology and genetics, and an upper-level elective and/or graduate-level courses in environmental microbiology or in the applicant's area of specialization.

**Department of Biological Sciences:**

The Department of Biological Sciences ([www.towson.edu/biology](http://www.towson.edu/biology)) is a dynamic, rapidly growing department, with broad areas of research interest in cell and molecular biology, organismal biology and ecology, physiology, science education and a strong Master's program. Interdepartmental programs in Molecular Biology, Biochemistry and Bioinformatics (MB3) and Environmental Sciences & Studies provide opportunities for interdisciplinary teaching and research. The Department of Biological Sciences provides a supportive and collaborative environment for both research and teaching and is committed to excellent student education in synergy and internationally recognized research programs. Most of the faculty maintain active research programs and 64% have been awarded significant extramural funding support in the last five years. The department supports molecular approaches to environmental, evolutionary and conservation biology research, with next generation sequencing instrumentation for RNA and DNA analysis and additional instrumentation for protein analysis, as well as the NSF-funded Urban Environmental Biogeochemistry Laboratory (UEBL, a cutting edge facility that supports

student and faculty research in Biology, Chemistry, Geoscience and Environmental Science.

**Towson University:**

Towson University ([www.towson.edu](http://www.towson.edu)) was founded in 1866, is recognized by U.S. News and World Reports as one of the top public universities in the Northeast and Mid-Atlantic regions, is Baltimore's largest university, and is the largest public, comprehensive institution in the university of Maryland System. TU enrolls almost 19,000 undergraduates and over 3,000 graduate students across six academic colleges (business, education, fine arts, health professions, liberal arts, science & mathematics), has over 865 full-time faculty, and offers more than 65 bachelor's, 45 master's, and 5 doctoral programs. Our centrally located campus sits on 330 rolling green acres and is 10 miles north of Baltimore, 45 miles north of Washington D.C., and 95 miles south of Philadelphia.

**Application Process:**

Review of application begins October 24, 2016 and continues until the position is filled. Send a curriculum vitae, copies of transcripts relating to graduate level work, a one-page statement on teaching philosophy, a 1-2 page statement on research interests, copies of 2-3 recent publications and three letters of reference electronically to [biolsci@towson.edu](mailto:biolsci@towson.edu)

For questions, please contact the search committee chair:

Dr. Michelle Snyder  
Towson University  
8000 York Road  
Towson, MD 21252-0001  
[msnyder@towson.edu](mailto:msnyder@towson.edu)

A Criminal Background Investigation is required for the hired candidate and the results may impact employment.

***Please be sure to visit***

***<http://www.towson.edu/odeo/employmentresources!data.html> to***

***complete a voluntary on-line applicant data form. The information you provide will inform the university's affirmative action plan and is for statistical-related purposes only. The information will not be used for any other purpose. Please note that the search number for which you have applied is: FCSM-N-3017.***

*Towson University is an equal opportunity/affirmative action employer and has a strong institutional commitment to diversity. Women, minorities, persons with disabilities, and veterans are encouraged to apply.*

## Stock Assessment Scientist

Title: Stock Assessment Scientist

Agency: North Carolina Division of Marine Fisheries

Recruitment Range: \$39,632 - \$44,509

Location: Morehead City, North Carolina

End Date: November 30, 2016

Please refer to the following link for position responsibilities, qualifications, minimum education and experience requirements, and instructions for applying:

<https://www.governmentjobs.com/careers/northcarolina/jobs/1576745/stock-assessment-scientist>

For additional information about this posting, please contact Melissa Ward at [Melissa.Ward@ncdenr.gov](mailto:Melissa.Ward@ncdenr.gov).



# Recent Publications

Hilling, C.D., S.A. Welsh and D.M. Smith. In press. Age, growth and fall diet of channel catfish in Cheat Lake, West Virginia. *Journal of Fish and Wildlife Management* doi: 10.3996/092015-JFWM-091.

Link: <http://fwspubs.org/doi/pdf/10.3996/092015-JFWM-091>

## Abstract:

Acidification has historically impaired Cheat Lake's fish community, but recent mitigation efforts within the Cheat River watershed have improved water quality and species richness. Presently, channel catfish *Ictalurus punctatus* are abundant and attain desirable sizes for anglers. We evaluated the age, growth, and fall diet of the population. We collected a sample of 155 channel catfish from Cheat Lake from 5 August to 4 December 2014, a subset of which we aged (n = 148) using lapillus otoliths. We fit four growth models (von Bertalanffy, logistic, Gompertz, and power) to length-at-age data and compared models using an information theoretic approach. We collected fall diets from 55 fish sampled from 13 October to 4 December 2014. Total lengths of individuals in the sample ranged from 154 to 721 mm and ages ranged from 2 to 19 y. We AICc-selected the von Bertalanffy growth model as the best approximating model, and the power and Gompertz models also had considerable support. Diets were numerically dominated by Diptera larvae, specifically Chironomidae and Chaoboridae, while 39% of stomachs contained terrestrial food items. This study provides baseline data for management of Cheat Lake's channel catfish population. Further, this study fills a knowledge gap in the scientific literature on channel catfish, because few previously published studies have examined the population ecology of channel catfish in the Central Appalachian region.

Hitt, N.P., E. Snook, and D. Massie. In press. Brook trout use of thermal refugia and foraging habitat influenced by brown trout. *Canadian Journal of Fisheries and Aquatic Sciences* doi: 10.1139/cjfas-2016-0255.

Link: <http://www.nrcresearchpress.com/doi/abs/10.1139/cjfas-2016-0255#.WAjXBPkrK71>

## Abstract:

The distribution of native brook trout (*Salvelinus fontinalis*) in eastern North America is often limited by temperature and introduced brown trout (*Salmo trutta*), the relative importance of which is poorly understood but critical for conservation and restoration planning. We evaluated effects of brown trout on brook trout behavior and habitat use in experimental streams across increasing temperatures (14-23 °C) with simulated groundwater upwelling zones providing thermal refugia (6-9 °C below ambient temperatures). Allopatric and sympatric trout populations increased their use of upwelling zones as ambient temperatures increased, demonstrating the importance of groundwater as thermal refugia in warming streams. Allopatric brook trout showed greater movement rates and more even spatial distributions within streams than sympatric brook trout, suggesting interference competition by brown trout for access to forage habitats located outside thermal refugia. Our results indicate that removal of introduced brown trout may facilitate native brook trout expansion and population viability in downstream reaches depending in part on the spatial configuration of groundwater upwelling zones.

# LEAN AQUACULTURE WORKSHOP

Reduced Costs | Improved Quality | Increased Efficiency

February 18th, 2017

San Antonio, TX

*Get tools and techniques you need to be more efficient and get results!*



## Workshop Content

Participants will explore tools to improve efficiency using guided team exercises and interactive simulations

- ⇒ Identify business strengths, weaknesses, opportunities, and threats (SWOT analysis)
- ⇒ Describe current workplace challenges and their solutions
- ⇒ Apply workplace organization and visual communication systems
- ⇒ Practice problem solving techniques
- ⇒ Brainstorm simple, low cost solutions that can be easily applied in the workplace
- ⇒ Develop value chain maps
- ⇒ Create individualized action plans



## Instructor/Facilitator



Terri Lawrence

CEO/Founder  
Lean Expert

- 20+ years experience in multiple industries
- National and international applications with results
- 1,000+ Improvement Events

## Workplace Benefits

- ◆ **Reduce waste**
- ◆ **Lower Costs**
- ◆ **Increase Efficiency**
- ◆ **Improve Quality**
- ◆ **Increase Customer Satisfaction**
- ◆ **Improve Employee Morale**

“Genius is one percent inspiration and ninety-nine percent perspiration.”

Thomas A. Edison

Visit [WAS.org](http://WAS.org)  
For more information



## Learn New Skills and Leadership Techniques

### What is the Lean method?

**Lean** is a customer-centric methodology used to continuously improve any process through the elimination of waste in everything you do; it is based on the ideas of “*Continuous Incremental Improvement*” and “*Respect for People*.”

**Lean manufacturing** is a business model and collection of tactical methods that emphasize eliminating non-value added activities (waste) while delivering quality products on time at least cost with greater efficiency.

**Lean management** is an approach to running an organization that supports the concept of continuous improvement, a long-term approach to work that systematically seeks to achieve small, incremental changes in processes in order to improve efficiency and quality.

**Lean production** is a Japanese approach to management that focuses on cutting out waste, whilst ensuring quality. This approach can be applied to all aspects of a business – from design, through production to distribution.



“Very effective in helping identify the problem areas and developing solutions to those problems.”

Workshop Participant  
August 2016

“It was a great session, great team, great leadership from Terri!!!”

Workshop Participant  
June 2016







David Cline  
USAS President Elect



“Those of us that have worked with Terri know that she is a fountain of useful information, tools and techniques to help us see the big picture of what we are doing and where we would like to go. While the content of the workshop may be difficult to describe, I suspect that if you attend you will gain a greater understanding of LEAN principles and how they can improve your business; whether that is research, production, education, management or outreach. Terri demonstrates a variety of tools designed to improve personal and organization efficiencies by systematically identifying problem areas, creating standard operating procedures, organizing your workplace, reducing wastes, and improving communication and workplace morale.”

## Agenda - February 18, 2017

- ◆ Workshop Objectives
- ◆ Industry Vision and Goals
- ◆ Introduction to Lean
  - 5 Lean Principles
  - 8 Wastes
  - Common Tools
  - Root Cause Analysis
  - Easy Management Tools
- ◆ Group Activity
  - Identify Issues in the Industry
  - Discuss & Prioritize
- ◆ Team Activity
  - Identify Potential Solutions for Top Issues
  - Prioritize Top Solutions
  - Report Out
- ◆ Create Action Plans
- ◆ Discuss Follow-Up Plan & Next Steps
- ◆ Adjourn



“They gave us tools and basic knowledge on how to better understand the production processes of our companies, looking for:

- a) optimizing procedures reducing expensive steps,
- b) improving communication between team members,
- c) saving money by omitting non-useful production steps,
- d) opening mind to give new production ways an opportunity to be tried and implemented in our companies.”

Jorge Cuéllar-Anjel  
Aquaculture Farmer  
Panama

## Pricing Information

- ◆ Base Price - \$200  
(Reduced from the Regular Price of \$399)
- ◆ USAS Member Pricing - \$100
- ◆ USAS Student Members - \$50

## Improvement Expert



**Terri Lawrence**  
Founder/CEO

(334)332-7048

[Terri.Lawrence@collaborative-impact.com](mailto:Terri.Lawrence@collaborative-impact.com)

### Professional Summary

Terri Lawrence is a dynamic, positive, and driven professional with more than 20 years of experience in facilitating, implementing, and creating inspired transformations through continuous improvement. Her experience spans a wide variety of engagements including large group presentations, small to medium-sized improvement workshop events, and one-on-one mentoring. Mrs. Lawrence's mission is to provide leaders, who have a drive for change, a simple and effective path to continuous improvement that gets results.

Terri Lawrence is experienced in executive coaching, negotiations, speaking, presenting, mediation, facilitating, education, and ultimately guiding organizations through positive change. She has served in many industries including aquaculture, healthcare, government, manufacturing, and scientific research & development.

### Personal Highlights

- ◆ Facilitated over 1,000 Rapid Improvement Events
- ◆ Conducted Lean workshops at South & Central American business owners' annual shrimp & tilapia feed training sessions
- ◆ Guided quality improvement events at fish processing plant
  - Reduced error rate
  - Increased fish yield
- ◆ Engaged farm maintenance crew in team building
  - Clarified top priorities
  - Developed vision, mission, & values
  - Created work priority boards
- ◆ Led strategic planning sessions at aquaculture facility addressing farming, processing, transportation, sales, and marketing
  - Identified issues/barriers
  - Brainstormed solutions
  - Created action plans
- ◆ Introduced African farmers to Lean practices, organizational skills, and standardization

### Exceptional Attributes

- ◆ Outstanding ability to motivate
- ◆ Impeccable skill for guiding others through change
- ◆ Exceptional talent for inspiring and focusing organizations to strive toward their vision, mission, values, and full potential
- ◆ Unique creativity to develop approaches that meet each client's specific needs
- ◆ Superior facilitation of strategy development focusing on high-level objectives, division goals, and department targets
- ◆ Extensive knowledge of effective strategy deployment navigation
- ◆ Vast expertise guiding businesses in connecting high-level goals with organization-wide activities
- ◆ Rare ability to navigate teams through tough issues with minimal conflict
- ◆ Great knack for teaching techniques using easy-to-understand methods
- ◆ Substantial proficiency and experience in applying improvement methodologies

# WATER QUALITY WORKSHOP

February 19, 2017

8:30 - 4:30

Aquaculture America 2017

*Water quality management is KEY for efficient and profitable aquaculture.*



## Instructors

## Workshop Content

Participants will learn about:

### **Water Chemistry**

- ⇒ Acid-base relationships
- ⇒ Hardness/Alkalinity
- ⇒ Nitrogen Cycle
- ⇒ Total dissolved solids
- ⇒ Dissolved oxygen
- ⇒ Redox potential
- ⇒ Toxic metabolites and algal compounds

### **Basics of recirculation aquaculture systems (RAS)**

- ⇒ Solids control
- ⇒ Gas conditioning
- ⇒ Biofiltration
- ⇒ Examples and case studies



**Claude Boyd**

Professor, Researcher,  
Author

Claude Boyd has taught classes on water quality and water quality management at Auburn University for 45 years. He and his graduate students have conducted research and published many papers on these topics. Boyd has also written several books on water quality and water quality management in aquaculture. He has consulted on water quality issues with aquaculture farms, governments, and mining, manufacturing, and public utility companies in over 40 countries.



**Chris Good**

Research Veterinarian

Chris Good is the Director of Aquatic Veterinary Research at The Conservation Fund's Freshwater Institute (Shepherdstown, WV). Chris earned a concurrent DVM and PhD in 2006 at the Ontario Veterinary College, Canada, and has worked as a research veterinarian at The Freshwater Institute for 10 years. His research and consultation focuses on improving the sustainability of the aquaculture industry through enhanced health and welfare of farmed fish, with a focus on salmonids in recirculation aquaculture systems (RAS).

Visit [WAS.org](http://WAS.org)  
for more information





Is water quality and chemistry important in aquaculture? **IT IS!**

**Sponsored by:**  
**USAS**



- Want a better understanding of aquaculture water quality chemistry and parameters?
- Want to use water quality parameter data to improve animal health and production?
- Join us for a day to learn ways to achieve these goals and become more efficient and successful at interpreting and managing water chemistry in aquaculture settings.

## Agenda - February 19, 2017

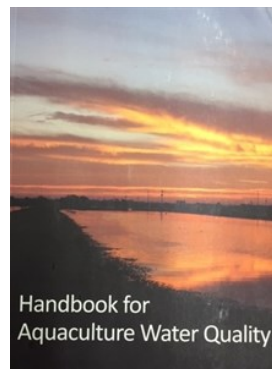
- ➔ 8:00—8:30 am - On-Site Registration
- ➔ 8:30—Workshop Objectives/Introduction
- ➔ 8:45—10:00 - Dr. Claude Boyd
- ➔ 10:00—10:15 - Mid-Morning Break
- ➔ 10:15 am—12:30 pm - Dr. Claude Boyd
- ➔ 12:30—1:30 - Lunch
- ➔ 1:30—2:30 - Dr. Claude Boyd
- ➔ 2:30—2:45 - Afternoon Break
- ➔ 2:45—4:30 - Dr. Chris Good
- ➔ Discussion
- ➔ Adjourn

## Pricing Information

- ◆ Base Price - \$200
- ◆ US Chapter of WAS Member Pricing - \$100
- ◆ US Chapter of WAS Student Members - \$50

(WAS members who are not USAS members can get chapter pricing by joining the chapter for \$5.00)

\* Attendees will receive a USB Key with course material.



### **Relevant Texts**

#### **Handbook for Aquaculture Water Quality**

Claude E. Boyd and Craig S. Tucker

(Available at the workshop for \$45)

#### **Recirculating Aquaculture**

Timmons, M.B., Ebeling, J.M. (2007). Cayuga Aqua Ventures, Ithaca NY

(Available on-line at Amazon.com, Abe-Books.com and Half.com)