



# AFS Estuaries Section News

## President's Corner

### Post Kansas City musings, or, I wish I could get more of that barbecue...!

The summer has come and gone, and many of us are wrapping up our field seasons, or have already done so. I hope that your research went well and that you had interesting findings.

As your section president, I attended the AFS Governing Board meeting in Kansas City, just ahead of the annual meeting. I almost didn't make it – violent storms

convinced my aircraft's pilot to turn around from his final approach into KC and high-tail it back to Chicago. I made it the next day, a little late. As we know, the warmer atmosphere produces more turbulence and more storms...I wonder how air travel will be influenced in coming years.

Much is in the works by AFS Headquarters. They have been

expanding their staff better to serve the membership and to increase our society's visibility. They have, among other things, an active policy group that is pro-actively developing informational materials to hand off to the next U.S. President's transition team. This will be made available after they deliver it. Headquarters has also developed a very handsome annual report for its 2015 activities – available at <http://annualreport.fisheries.org/>.

We ran the Estuaries business meeting on Sunday afternoon... or tried to. It turned out that we did not have a quorum, so could not conduct official business. Our section, half the size of the Marine section, has the same number of attendees (N = 10) for a quorum. I will be contacting you to vote to revise the quorum



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number downwards – 5 would seem to be a better number for us.

In addition, as we scrutinized the section's bylaws, we realized that we also need to revise them to permit us to run our elections electronically. Thus, please expect this year's election ballots to arrive by U.S. Postal Service – as a postcard that will also ask you to vote on the bylaws revisions.

Now, as to the meeting itself: it was fun! Kansas City is a really nice place – granted, kind of far from an estuary, but a friendly place with free tramway service to cool destinations, and – yes, the barbecue was every bit as good as its reputation. Attendance at AFS 2016 was down, as expected, but actually higher than expected (N = 1300). It was a little calmer than the large meetings, and I focused on enjoying the three symposia that our section sponsored. We'll have some reportage about those in this newsletter. ■

*Karin Limburg  
Estuaries Section President*

The American Fisheries Society and the Florida Chapter will host the 147th AFS Annual Meeting at the Tampa Convention Center from August 20–24, 2017. This year's conference theme, is “Fisheries Ecosystems: Uplands to Oceans.”

Proposals for Symposia must be submitted by January 20, 2017.

Accepted Symposia proposals will be posted on the conference website on February 15, 2017.

If accepted, organizers must submit a complete list of confirmed presentations and titles by March 10, 2017.

Abstracts for Symposium oral presentations must be submitted by March 17, 2017.



AMERICAN FISHERIES SOCIETY  
147TH ANNUAL MEETING  
**TAMPA, FLORIDA**  
AUGUST 20-24, 2017

## 2016 Student Travel Award Winners

### **Samantha Binion-Rock**

North Carolina State University

Ph.D. Candidate

Advisor: Dr. Jeff Buckel

Presentation at Kansas City: Identification of Forage Fish in Estuarine Systems Using Qualitative and Quantitative Criteria

Samantha is conducting a multispecies food habits study in Pamlico Sound, NC, and using this data to explore the effects of spatial dependence on diet estimates, identify forage fish in this system, and build and EwE model for the Sound.



### **Grant Adams**

University of Southern Mississippi

Master's Candidate;

Advisor: Dr. Robert T. Leaf

Presentation at Kansas City: Environmentally Driven Fluctuations in Condition Factor of Adult Gulf Menhaden in the Northern Gulf of Mexico.

Grant's thesis work is focused on understanding variation in the dynamics of commercially important fishes in the Gulf of Mexico to inform on the ecology and sustainable use of marine resources.





# 2016 KANSAS CITY, MISSOURI

August 21-25  
146th Annual Meeting



## Estuaries Section Sponsored Symposia Summaries

### **Fisheries Management from the Great Lakes to the Gulf: Sea Grant's Role in Research, Outreach, and Building Partnerships along the Mississippi River**

**Chair:** Jayson Beugly, Illinois - Indiana Sea Grant and Purdue University

#### **Organizers:**

Laura Kammin, Illinois-Indiana Sea Grant

Matthew Bethel, Louisiana Sea Grant - Louisiana State University

Abigail Archer, Cape Cod Cooperative Extension & Woods Hole Sea Grant

C. Eliana Brown, Illinois-Indiana Sea Grant

In honor of the 50th anniversary of Sea Grant, this symposium focused on interjurisdictional management issues along the Mississippi River and the research and outreach contributions made by Sea Grant programs and partners. There were a total of nine presenters for the symposium.

Louisiana Sea Grant Director Robert Twilley and IL-IN Sea Grant Director Brian Miller gave co-keynote presentations for this symposium that detailed the connection between the natural and social systems from the catchment to the coast of the MS River Basin and how we can work collaboratively to address basin-wide issues. They set the charge as the opening keynote speakers on exploring opportunities for future partnerships in the region.

Subsequent presentations highlighted Sea Grant's historical involvement in Mississippi River Valley collaborative efforts and the resulting outcomes and impacts of this work, as well as how Sea Grant may leverage previous and existing partnerships with its Land Grant partners to explore opportunities for future partnerships in the region. Panelists also focused on new tools and practices revolving around aquatic invasive species (AIS) prevention efforts and the resulting outcomes and impacts of this work, as well as how we may leverage the AIS research, outreach, and communication



See **SYMPOSIA**, Page 5

## ***Estuaries Section Symposia, cont'd***

programming successes discussed to better understand invasions and reduce invasion risk across the MS River Basin. Additionally, Sarah Orlando demonstrated how Ohio Sea Grant's Clean Marinas Program is helping to enhance environmental stewardship in the recreational boating industry through helping marina operators and boaters become more aware of environmental laws and recommendations. Recently this program was expanded across Ohio to the Ohio River watershed – thereby directly impacting water quality issues in the MS River Basin.

Complementing these presentations, several other speakers highlighted efforts that serve as valuable resources that Sea Grant and its partners can leverage in strengthening agricultural producer investment in natural resource and ecosystem protection to address nutrient movement and water quality issues throughout the MS River Basin.

Notably, the symposium was attended by a balanced mix of seasoned and mid-career researchers with students and early-career workers. The presentations sparked numerous conversations about ideas and potential collaborations during breaks, and several participants expressed their appreciation at the chance to network with people up and down the MS River Basin.

We hope to build on the momentum established in Kansas City and explore opportunities for future partnerships in the region focusing on inter-jurisdictional management issues. The information presented at this symposium and subsequent discussion is very helpful as we move forward and continue to engage Sea Grant and partners in related efforts to address MS River Basin issues. ■

—Matthew Bethel, Louisiana Sea Grant, [mbethe3@lsu.edu](mailto:mbethe3@lsu.edu), and Jay Beugly, IL-IN Sea Grant, [jbeugly@purdue.edu](mailto:jbeugly@purdue.edu)



Louisiana Sea Grant Executive Director Robert Twilley giving a keynote presentation to open the session – photo credit to Samuel Chan.

## ***Estuaries Section Symposia, cont'd***

### **Effects of Drought on Aquatic Resources, Fisheries Management, and Mitigation Strategies**

#### **Chairs:**

Stephan Magnelia & Kevin Mayes, Texas Parks and Wildlife Department

#### **Organizers:**

Matthew Altenritter, Department of Life Sciences, Texas A&M University

Lindsay A. Campbell, Biological Sciences, North Carolina State University

Karin Limburg, State University of New York

Stephan Magnelia & Kevin Mayes, Texas Parks and Wildlife Department

Tom Lang, Texas Parks and Wildlife & AFS Fish Habitat Section

Ryan Roberts, Association of Fish and Wildlife Agencies

### **Drought Focused Symposium Highlights a Diversity of Challenges Facing Fisheries Managers**

<sup>1</sup>Matthew Altenritter & <sup>2</sup>Lindsay Campbell & <sup>3</sup>Karin Limburg

<sup>1</sup>Texas A&M University-Corpus Christi

<sup>2</sup>North Carolina State University

<sup>3</sup>State University of New York, College of Environmental Science and Forestry

Drought is becoming an increasingly common phenomenon with direct and potentially severe consequences for fisheries and aquatic resources. From a fisheries perspective, working through droughts requires bridging the gap between human and ecological water needs. At the 146<sup>th</sup> annual meeting of the American Fisheries Society held in Kansas City, Missouri, organizers from the Estuaries Section, Fish Habitat Section, and Texas Parks and Wildlife Department strived to do just that.

Prior to organizing what would be the finalized symposium “Effects of Drought on Aquatic Resources, Fisheries Management, and Mitigation Strategies,” three separate groups had concurrently submitted proposals for drought-related symposia for the KC meeting. This let us know we had hit on a desired, relevant topic. After some discussion, combining the three symposia into one was appropriate, and quite fitting given the meeting’s theme of “Fisheries Conservation and Management: Making

Connections and Building Partnerships.” This symposium spanned two days and included talks from twenty-three speakers representing state and federal agencies, academic institutions, and non-profits. The breadth of interest in this topic was also demonstrated geographically with speakers coming from throughout the south (e.g., Texas, Alabama, Florida) and as far west as Washington and California, and as far east as Tennessee.

The geographic diversity of the speakers was also complemented by a diversity of talks. At broad scales, issues of connectivity among river systems and in some cases between freshwater and marine environments due to drought emphasized potential trans-ecosystem effects. Speakers also discussed probable changes in fish community composition associated with drought, and on a more species specific level, implications of drought for reproduction and migration. Importantly, nine presentations highlighted current efforts, legislation, and developing mechanisms currently applied in order to balance human and ecological water needs. Overall, this symposium demonstrated that while drought presents a variety of challenges to fishery and aquatic resource managers, diverse approaches to mitigate the effects of drought are being pursued.

Helping to bring together a dynamic symposium like this can be a great way to get involved in your AFS Chapter or Section. After volunteering to help with coordinating, Matt and Lindsay exchanged emails on various topic ideas and then had a virtual meeting via Skype to further discuss topic options, pros and cons, and flesh out the decided on topic of drought. Support and guidance was provided by Karin at every step, though Lindsay and Matt were encouraged to work autonomously to get the job done. The next step was to use networking skills to contact potential invited speakers. Reaching out and starting dialogues with researchers around the US can seem intimidating, but was rewarding and expanded the scope of many research activities even within a seemingly narrow topic. Colleagues were very receptive to the idea of the symposium, were willing and able to participate, and many also suggested other researchers to contact. The parent society provided access to many helpful people working on organizing meetings, wanting each symposium to be as successful as it can be, and answered questions about registering the symposium, the software to organize, and all aspects of the process. As with the fisheries community in general, everybody was willing to help, excited about science, and along with the theme, clearly wanted to “make connections and build partnerships.”



## 2016 KANSAS CITY, MISSOURI

August 21-25  
146th Annual Meeting



Even though Lindsay was not able to attend this year's meeting in Kansas City, she was able to be a part of the meeting through organizing the symposium. Both Lindsay and Matt gained contacts and information about people and research projects beyond their normal areas of fisheries. Participating in the organization of this one small part of the large meeting fostered a new appreciation of the enormous effort, enthusiasm, and pride that goes into the annual parent society meeting. Small efforts by everybody make for a great meeting and useful fisheries society as a whole. ■

### **Inland Drivers of Coastal Hypoxia**

#### **Organizers:**

Gwen White, U.S. Fish & Wildlife Service

Thomas Bigford, American Fisheries Society

Mary C. Fabrizio, Virginia Institute of Marine Science

Karin Limburg, State University of New York

Benjamin Walther, Texas A&M University

A symposium jointly sponsored by the Fish Habitat, Marine Fisheries and Estuaries Sections explored how inland land use decisions are related to the success of major fisheries and aquatic habitat restoration efforts in coastal areas such as the Long Island Sound, the Potomac and Gulf of Mexico. Land use far inland can cause nutrient amplification, algal blooms and depleted oxygen in both local waters and many miles downstream. Hypoxia can exacerbate stress on commercial species, degrade habitat, shift ecological communities and destroy fisheries-dependent cultures and economies. Read the symposium abstracts here < <https://afs.confex.com/afs/2016/meetingapp.cgi/Session/4371>>.

If fisheries biologists understand and can communicate how land use is related to habitat and water quality impacts, other sectors can use that information to make decisions about how working lands cause or mitigate impairments. Other sectors that also rely on high quality source water for drinking, industry, and recreation, may be natural allies for ecosystem services produced through habitat conservation.

Individual estuaries and species may differ in their response to eutrophication and hypoxic conditions. Hypoxia, thermal extremes, coastal acidification, and contaminants affect three taxa with distinct life histories, ecologies, and positions in the inshore community – Atlantic and shortnose sturgeons, winter flounder and Atlantic tomcod (Chambers, et al). The cycling of redox-sensitive elements such as manganese in hypoxic zones offers an opportunity to reconstruct lifetime

hypoxia exposure in otoliths of mobile fish species (Altenritter, et al.). Lake Erie has strong productivity gradients caused by nutrient distribution which may affect trophic levels. This study was designed to quantify how multiple productivity gradients affect energy flow to fish and the resulting fish-community structure (Yanos, et al.).

Properly designed and positioned, wildlife conservation and resource-based bioenergy practices can also filter nutrients, provide habitat and support bioenergy production. Which conservation practices are adopted and why may differ within the Basin—and may change in the future due to climate drivers (Singh). The Arkansas-White-Red (AWR) and Tennessee River basins, two of five major river basins draining to the Mississippi River, have a strong precipitation gradient from east to west; advanced cellulosic feedstocks are projected to become economically feasible within normal-to-wet areas of the region. Modeling identified large regions where bioenergy production would be sustainable, both in terms of both economic feasibility and water-quality protection (Jager, et al.). Habitat restoration can provide multi-sector benefits. For example, reconnecting oxbows to prairie streams during high-flow events can provide important habitat for many species, improve flood plain reconnection, and improve water quality (Wilke, et al.).

To reduce local and downstream water quality impacts to fisheries and aquatic resources, the conservation community must have reliable predictive models, optimization tools, and evaluation metrics to prioritize and adaptively manage the design and configuration of conservation actions that detect and alleviate hypoxic impacts. For example, the National Weather Service North Central River Forecast Center (NCRFC) has partnered to develop the first real-time web-based forecast guidance so that farmers can plan to avoid applying nutrients before significant runoff events, decreasing impacts on waterbodies (Goering, et al.). The Gulf Hypoxia Initiative, spearheaded by seven Landscape Conservation Cooperatives (LCCs), is an objective-driven process for targeting delivery of wildlife conservation practices that benefit wildlife, water quality and agricultural productivity at both the very large Mississippi Basin scale and locally in pilot watersheds (White, et al.).

The session closed with an excellent audience discussion, considering how landscape scale challenges such as climate change and socioeconomic conditions will continue to drive both the causes and consequences of hypoxia. In order to meet these large-scale challenges, additional dialogue between the distinct agricultural, wildlife, water quality and energy sectors will be necessary to ensure that our conservation actions generate the greatest possible impact for a sustainable and multifunctional working landscape. ■

## Estuaries Section Treasurer's Report

submitted on 11/15/2016

by

Dr. Konstantine J. Rountos

### Recent transactions:

Date:	Balance	Credit	Debit	Note:
8/21/16	3,463.23			2016 Treasurer's Report at 2016 Annual Business Meeting, KC.
8/29/16	3,063.23		400.00	Travel award to S. Binion-Rock - 2016 PhD Travel Award
8/30/16	2,663.23		400.00	Travel award to G. Adams - 2016 MS Travel Award
11/15/16	2,663.23			Current balance

**Looking to practice your leadership skills?**

**Want to contribute to the Society?**

**Know someone with great ideas and charisma?**

Then consider nominating yourself or a friend for an Executive Committee position with the Estuaries Section! In early 2017 we will conduct an election for the positions of President-Elect & Secretary.

Please contact Karin Limburg with any questions ([klimburg@esf.edu](mailto:klimburg@esf.edu)) or to throw your hat in the ring! Nominations are open until January 30.

Our Winter 2017 newsletter will feature information about the candidates and statements about why and how they would like to lead the Section.

**Check us out online!**

Website: <http://estuaries.fisheries.org> • Facebook: <http://www.facebook.com/EstuariesSectionAFS>

LinkedIn: <https://www.linkedin.com/grps/Estuaries-Section-American-Fisheries-Society-7443198/about>