



American Fisheries Society Education Section

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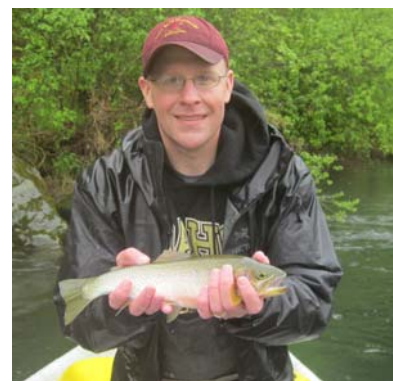
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PRESIDENT'S LINE

I hope this newsletter finds you well and that you are having a safe, happy, and productive summer. As you are likely aware, 2013 is an election year for the Education Section and we will be installing new officers at the Little Rock meeting. In this issue of the newsletter you will find an excellent slate of candidates running for the various positions. It is important that you participate in the election process, so please be sure to vote. Also, please be sure to thank all of those who agreed to run for a position the next time you see her or him. Regardless of the outcome, each candidate has made the decision that they are able and willing to serve the Section. I am thankful that they have made that decision. Along those lines, I know how busy everyone is these days, but I continue to encourage all of you to get involved in the Section. The Section serves vital roles in AFS and the profession. You do not have to be an officer or committee chair to be involved. We are always looking for people to review award applications, serve as judges, or simply provide input on ideas. So, please consider increasing your involvement in the Section—I promise you will not be disappointed.



Mike Quist is an Assistant Unit Leader at the Idaho Cooperative Fish and Wildlife Research Unit and can be reached at mcquist@uidaho.edu.

Since this is my final President's Line, I'd like to highlight several activities and accomplishments of the Section while also thanking those who have contributed to our success. I have thoroughly enjoyed my time serving the Section and look forward to continuing that service in other capacities. Craig Paukert will be installed as the new President. I am grateful to Craig for his leadership and support as President-Elect over the last few years; we are fortunate in that the Section will be in great hands over the next two years. Katie Bertrand is finishing her service as Secretary-Treasurer. Katie has done a fantastic job of managing our finances and providing input on a variety of issues facing the Section. Steve Chipps (Past-President) helped us stay on course and served as a continual source of new ideas and perspectives. I will certainly miss his guidance and our frequent discussions. I also thank the Division Representatives (Western Division—Jeff Jolley; North Central

Online Resources

Education Section:

www.fisheriessociety.org/education/

Student Subsection:

www.fisheriessociety.org/edustu/

Previous newsletters:

www.fisheriessociety.org/education/newsletters.htm

Education Section list serve:

<http://lists.fisheries.org/listinfo.cgi/edu-fisheries.org>

Division—Tracy Galarowicz; Northeastern Division—Allison Roy; Southern Division—Julie Harris) for their service to the Section.

Most of the Section's activity emerges from the efforts of our committees. One of the busiest committees is the Best Student Paper and Poster Award Committee. Melissa Wuellner, Dan Magoulick, and Craig Paukert are co-chairs of the committee (note: this is Melissa's second consecutive year serving as co-chair!). Melissa co-authored a manuscript in *Fisheries* (38:88-90) with Shannon Fisher (last year's co-chair) describing the history of the award(s) and the application process. The manuscript has served to increase awareness of the award and reduce confusion associated with the application process. Like those in previous years, the Best Student Paper and Poster symposia are sure to be excellent at the meeting in Little Rock. Dan Daugherty continues to serve as the chair of the Skinner Memorial Award Committee and Jason Vokoun serves as the chair of the Excellence in Fisheries Education Award Committee. Both of these committees provide an important service to the Section by recognizing "up-and-coming" fisheries professionals and those contributing to the education and mentoring of future fisheries scientists. Jesse Fischer serves as the chair of the Membership Committee. A few years ago the Membership Committee established a new award, the Young Professional Travel Award, aimed at providing travel support for a recently graduated professional to attend the annual meeting. In addition to administering the award for this year's meeting, the committee has been working to streamline the application process and better define award criteria. Mike Colvin, Dan Dauwalter, and Justin VanDeHey have "resurrected" the New Initiatives Committee. They have identified and formalized a number of excellent ideas for the Section to consider as future action items. We are currently discussing the best process for implementing the initiatives. Steve Ranney maintains the Section's website and continues to do an excellent job. Finally, Landon Pierce and Cari-Ann Hayer never cease to amaze me with their efforts as Editors of our newsletter. They work hard to gather submissions, edit those submissions, and then work with the layout to ensure everything is logically organized and presented in a professional manner. I think we can all agree that they do an excellent job! In addition to those identified above, there are dozens of members who serve as active committee members, reviewers, judges, Education Section representatives on parent-level committees, et cetera. Every one of those people who have volunteered their time and energy to the Section deserve our gratitude.

As my term as President comes to a close, I thank everyone for their support and guidance. Though highly biased, I maintain that the Education Section is best section in AFS. It is the perfect place to get involved with AFS because of the experience and caring attitude our members bring to the Society. Members of the Education Section are inherently interested in mentoring and seeing the profession move forward; so, don't be shy with regard to getting involved. Again, thank you for the opportunity to serve the Section, AFS, and the fisheries profession.

I hope to see you all at our business meeting in Little Rock. The meeting is from 5-7 pm on Sunday, September 8 (Grampus Room—Little Rock Marriott). As always, please do not hesitate to contact me if you have any questions, comments, suggestions, or concerns about the Section (mcquist@uidaho.edu; 208-885-4064).

Bridging the Gap between Fisheries Science and Engineering

By: Bradly Trumbo

Two professional organizations have been working to unite fisheries and engineering professionals for decades. The American Fisheries Society Bioengineering Section (AFS-BES) and American Society of Civil Engineers Environmental & Water Resources Institute (ASCE-EWRI) have operated alongside one another providing benefits to fisheries and infrastructure. Recently, however, ASCE-EWRI and AFS BES began working together to strengthen the bond between fisheries science and engineering. ASCE-EWRI joined hands with AFS-BES in 2011 to create an ad hoc committee on partnership and fish passage. The Committee was tasked with fostering communication between AFS-BES and ASCE-EWRI by providing opportunities for engineers and biologists to share relevant knowledge, and to collaborate on fish passage projects.

The ad hoc Committee on Fish Passage was adopted as the Fisheries Engineering Committee, a standing committee under the ASCE-EWRI Hydraulics and Waterways Council in 2012. The Committee is now referred to as the ASCE-EWRI – AFS-BES Joint Committee on Fisheries Engineering and Science. The Committee is working toward creating a “home” for fisheries engineers and scientists within ASCE-EWRI while introducing them to and keeping them connected with AFS-BES. Present Committee members possess a diversity of experience, education and expertise, share interesting perspectives and knowledge on a broad variety of fisheries engineering and science, and their professional contacts create a dendritic network that includes representatives from across the USA.

Initial Committee efforts have focused on the creation of a web-based fish passage literature repository that is housed and maintained by the University of Massachusetts, Amherst. The literature repository provides a variety of references from gray literature to journal articles and allows users to search current content and provide new entries. The repository will be further improved in the future to provide an effective resource to academics and practitioners alike. The Committee is also assisting the University of Massachusetts (UMass) with the annual, nationwide, Fish Passage Conference series. This conference was first held at UMass in 2011 and subsequently held at UMass in 2012 and at Oregon State University (OSU) in 2013. In the spirit of partnership, the 2013 conference was jointly hosted by OSU and Humboldt State University. The purpose of the conference is to bring fisheries engineers and scientists together to present ideas and projects that will promote sustainability through the enhancement of fisheries and infrastructure; just as the AFS and ASCE have done for more than a century.

In the first year as a standing committee with ASCE-EWRI, the Committee is striving to provide greater opportunity and recognition to early and mid-career level fisheries pro-



Bradly Trumbo is a fishery biologist for the US Army Corps of Engineers-Walla Walla District and can be reached at Bradly.Trumbo@gmail.com

professionals engaged in fisheries engineering. The first annual Fisheries Engineering Committee Distinguished Project in Fisheries Engineering and Ecohydrology award was presented at the International Conference on Engineering & Ecohydrology for Fish Passage in Corvallis, Oregon, in June. The Committee solicited nominations for projects that provided a multidisciplinary approach to collaboration, innovation, education, and improved ecological value for passage of aquatic and anadromous species. The 2013 recipient project was the "Development and Application of the Uniform Acceleration Bypass Weir for Downstream Passage at Dams and Water Intakes". There were a number of closely matched nominations, but this project stood out because the bypass weir was designed by a multi-agency group of Federal and private engineering firms and the concept has since been employed at a number of various projects to include hydroelectric facilities.

Interest in the Committee is growing and the next project is to develop a fisheries engineering webinar series. The Committee is very active and members are required to be involved with at least one project or activity annually. Committee members are also afforded the opportunity to float ideas and provide input for current and future projects, as well as gain leadership experience. Committee members have opportunities to lead Task Committees (a subgroup that heads up a project), develop plans for future fish passage meetings, and potentially serve as a Committee officer. As the Committee evolves we will need more support to expand the benefits that we hope to provide to the fisheries engineering and science community. Students and professionals who are interested in the Committee are encouraged to visit the AFS-BES and ASCE-EWRI websites for more information.

Executive Committee:

Michael Chelminski	(michael.chelminski@stantec.com)	<i>Chair</i>
Denis M. Ruttenberg	(druttenberg@balancehydro.com)	<i>Vice-Chair</i>
Kathy L. Hoverman	(Kathy.Hoverman@kci.com)	<i>Secretary</i>
Bradly Trumbo	(bradly.a.trumbo@usace.army.mil)	<i>Treasurer</i>

American Society of Civil Engineers-Environmental Water Resource Institute (ASCE-EWRI):

<http://www.asce.org/ewri/About-EWRI/>

American Fisheries Society Bioengineering Section (AFS-BES):

<http://www.fisheriessociety.org/bes/>

ASCE-EWRI – AFS-BES Joint Committee on Fisheries Engineering and Science:

<http://www.asce.org/ewri/CommitteeDetail.aspx?committeeId=000009408156>

Fish Passage Literature Repository:

<http://scholarworks.umass.edu/fishpassage/>

A Partnership for Rural Science Education

By: Dr. Nicole Kirchhoff

Last week, 70 of Maine's most celebrated 6-9th grade science teachers united with University of Maine (UMaine) Science and Science Education faculty on the stunning shores of Schoodic. Representing a unique collaboration between 18 rural Maine school districts, the Maine Center for Research in STEM Education (RiSE Center) at UMaine, several non-profit organizations and the Maine Department of Education, the Maine Physical Sciences Partnership (MainePSP) supports teaching and learning of the physical sciences in grades 6 thru 9.

Given recent, substantial changes in education standards, this program is a welcome relief to many teachers in rural Maine.

"With a developed curriculum, teachers, leaders, and a support group, it is great not to have to worry," said first time participant Beth Handley.

Supported by a \$12 million grant from the National Science Foundation, the MainePSP strives to build a sustainable science education infrastructure to support rural science educators. The program started three years ago with 25 teachers and has grown to include 70 teachers, spanning 18 districts. "MainePSP is unique in that it starts with the teachers. Having teachers as the champions of this program ensures it will become part of the school culture; withstanding inevitable changes in administration and school priorities," said MainePSP Resource Coordinator Jason Baker.

The 6th grade curriculum incorporates the earth sciences. Last week, Dr. Dan Capps, Assistant Professor of Science Education at UMaine, began his session by having teachers attempt to answer the question 'where are deserts located? And why do they form where they do?'. Using computer simulations, teachers were asked to redefine models, ask questions, and attempt to mimic exactly what their students will be asked to do in the classroom. As I listened to their discussion, not only did I hear laughter, but sometimes-heated discussions. One of the teachers told me that this is exactly what happens in their classroom and it is their favorite part. The students become so involved they are inspired to learn far more than just the basics; pushing each other far deeper into a subject than conventional curriculums ever enabled us to go.

As part of the program, each teacher is provided with a full program of study, a set of all the instructional materials for the course, and access to a specially designed online community. Because each year's instruction is designed to run simultaneously at each school in Maine, the online community allows teachers to give each other real-time sup-



Teachers Kathy Dixon-Wallace and Katie Danielson are looking at a diabase dike at Schoodic Point. Photo by Dr. Lauren A Barth-Cohen.

port. The website includes real-time discussions, journaling, resources, assessments, and video enrichments, shared by fellow participating teachers.

Veazie teacher, Lauree Gott is a third year veteran of the program. Being the only science teacher in her building, the MainePSP community has become her strongest support system. With access to University faculty and resources far beyond the budget of her rural school, Lauree has become a champion of the program within the state of Maine.

The MainePSP program is data driven, meaning teachers and faculty members are constantly using their experiences and measurements of student learning to improve the program and make it as effective as possible. Once a month, faculty members from UMaine travel to the three regional areas of Maine to discuss science teaching and learning with teachers in the region. Every 6 weeks, all teachers within each subject area meet face-to-face to discuss what is working, what isn't working and any novel ideas they may have to improve the program.

"The biggest success of the program is really changing the way science is taught," said Principal Investigator Susan McKay, a physics professor and director of the RiSE Center. No longer are students forced to learn science through a set of boring lectures. Today's students are able to be active participants in their learning, including hands on activities, open discussions and inspired debates.

At the beginning and end of each school season, MainePSP teachers are asked to participate in the Summer Academy. This week long meeting took place at the Schoodic Education and Research Center (SERC) located in Winter Harbor, Maine. "This is our third year at SERC. [The facility] works so well, we love coming here," said Susan McKay.

In addition to enhanced teaching and learning, MainePSP also enables continuity of teaching across the state. "With the common language and curriculum, students are able to seamlessly move from school to school without losing the opportunity to learn", advocated Lauree.

MainePSP has two more years of funding, with the hopes of reaching at least 100 teachers by 2015. Through the hard work, dedication, and championing from these outstanding educators, Maine is changing the face of science education in the USA.



Teacher Cindy Lambert studying the texture of the rocks at Schoodic Point. Photo by Dr. Lauren A Barth-Cohen.

**For more information please contact:
Dr. Nicole Kirchhoff (207) 963-2168 or (561) 818-0173**

Arkansas Chapter Members Judge Regional and State Science Fairs

By: Bill Shinn

I would like to thank all the Arkansas Chapter –American Fisheries Society members who helped judge regional and state science fairs in 2013, especially the students from the different Subunits. It takes many folks working together to go to the different science fairs.

Again thanks for judging the different projects and encouraging the students.

Thanks;
Bill Shinn, Chairmen Education Liason Comm.
Arkansas Chapter of AFS

Results of the 2013 Arkansas State and Regional Science Fairs

The West Central Regional Science Fair was held on February 27th through March 1st at Arkansas School for Math and Sciences and the Arts (ASMSA) in Hot Springs.

- High School Division Winner: “The Effects of Dam Construction on Marine Life” by Taylor Flynn
- Honorable Mention: “Diatoms as Indicators of Water Quality in the Ouachita River Watershed” by Trevor Lister
- Judge: Clint Coleman

The Central Arkansas Regional Science Fair was held on March 1st at UALR in Little Rock.

- Junior High School Division Winner: “Oil Spill Up: The Effect of Oil Spill Cleaning Agents on Aquatic Plants” by Chythonya Murali from Lisa Academy in North Little Rock
- High School Division Winner: “The Effect of Diesel Fuel of Daphnia Magna” by Azrene Matin of Little Rock Central
- Honorable mention: “The Effects of Color on Reaction Time of Beta Fish” by Hannah Moody from Little Rock Central, “Water Quality” by Hayes McNeely from Pulaski Academy High School, and “Plants Effects on the Water Quality of A Goldfish” by Ashely Elliot from Pulaski Academy High School
- Judges: Justin Stroman, Ruddle Allen, Greyson Farris, Bill Shinn and Clint Coleman

The North-West Arkansas Regional Science Fair was held March 15th at University of Arkansas in Fayetteville.

- Junior High School Division Winner: “The Effects of Over-Fertilization on our Watershed in Beaver Lake Water Supply in Northwest Arkansas” by Patrick Lester from Haas Hall Academy
- High School Division Winner: “Where is the D.O.” by Andrew Wolfe from Alma High School
- Judges: Dustin Lynch and Brad Austin

The Southeast Arkansas Regional Science Fair was held March 7th at the University of Arkansas at Monticello.

- Junior High School Division Winner: “Water Purification” by Jonathan Hibbard from Star City Middle School
- High School Division Winner: “What’s really in the water : environmental analysis of the Ouachita River” by Noel Philley from Crossett High School
- Judges: Brett Timmons and Kyle Rachels

The Northeast Arkansas Regional Science Fair was held March 8th at Arkansas State University in Jonesboro.

- Junior High School Division Winner: “Ph Phactors” by Lydia Fletcher from Annie Camp Middle School
- High School Division Winner: “What’s in your Creek” by Anna Rougeau from Nettleton High School
- Judges: Rich Grippo and Katie Kilmer

The 59th Southwestern Energy Arkansas Science and Engineering Fair was held March 29th at The University of Central Arkansas in Conway. High school students (grades 9-12) who are winners from regional fairs are invited to exhibit projects on their research in the State Science Fair, which is affiliated with Society for Science and the Public, Washington D.C. Recognition for excellence is made in eighteen categories. The Arkansas Chapter of the American Fisheries Society members help pick the “Best Aquatic Science Award” among the different environmental projects and the winner receives a certificate, a plaque, and a check for \$100.00.

- Winner: “What’s Really in the Water? Environmental Analysis of the Ouachita River” by Noel Philley from Crossett High School
- Sarah Storm, Noel Philley’s teacher, also received a certificate of appreciation from our chapter.
- Honorable mention: Anna Rougeau, Taylor Flynn, Osvaldo Cossio, and Wilson Guillort
- Judges: Bill Shinn, Brian Wagner, Reid Adams, Jim Winter and Justin Stroman

Student Subsection of the Education Section News

By: Dan Dembkowski

The Student Subsection has been active with a variety of tasks this year. One of our major undertakings was to continue to refine and develop a travel award for undergraduate students. This award was designed in part as a solution to an issue that has plagued AFS for the past few years: recruitment and retention of new members. The award is intended to foster undergraduate participation and involvement in Parent Society functions and to increase undergraduate presence during annual meetings. We will be discussing the future of the award during the Education Section business meeting in Little Rock. Please join in the discussion as we look forward to hearing your thoughts and suggestions for improving the award. **The announcement for this year's award can be found on page 23. Please encourage undergraduate students to apply.**



Dan Dembkowski is the president of the Student Subsection. He can be reached at daniel.dembkowski@sdstate.edu.

Thanks to Rebecca Krogman, our Webmaster, we have continued to improve the Student Subsection webpage (<http://www.fisheriessociety.org/edustu/>). Awards available for students at all levels of AFS (Parent Society, Division, Section, and Chapter) are currently listed on the webpage. If your organization would like to post an announcement for a student award on our webpage, please contact Dan Dembkowski (daniel.dembkowski@sdstate.edu) or Landon Pierce (llp5yc@mail.missouri.edu). We will continue to work towards improving communication among Student Subunits and between the Parent Society and student groups.

Lastly, we have added a new "twist" to some of the student events at this year's annual meeting in Little Rock. The Student Subsection has been working closely with the Equal Opportunities Section to plan a joint colloquium which will take place during the time scheduled for the Student Colloquium (Monday, September 9) and prior to the Student Social on Tuesday, September 10. The colloquium will consist of a panel of speakers identifying how to increase marketability and take advantage of opportunities to become more involved in AFS and in recruiting programs that open doors for aquatic resource employment opportunities. The event planned on Tuesday evening will be a "ladies night" of sorts where we will highlight the accomplishments of some of our outstanding female aquatic scientists. Everyone is welcome!!

News from the Coastal Resources Management Program (East Carolina University)

By: Coley Hughes

The Coastal Resources Management Program (CRM) was well represented at the 142nd Annual Meeting of the American Fisheries Society, held August 19-23, 2012 in St. Paul, MN. CRM faculty members Drs. Joseph Luczkovich and Jeffrey Johnson co-chaired a symposium titled, "The New Food Web: Emerging Methods for Bringing Together Social and Ecological Networks." The symposium focused on integrating human and ecological networks and featured presentations by Luczkovich ("Shrimp Trawling, Ecosystem Impacts, Climate Change, and the Future of Wild Shrimp Harvests: A Network Modeling Approach"), Johnson ("Integrating Human and Ecological Networks"), as well as recent CRM graduate, Dr. Rebecca Deehr ("Detecting the Impacts of Commercial Shrimp Trawling on Food Webs in Core Sound, North Carolina") and the research of CRM student Andrea Dell'Apa ("International Trade in Spiny Dogfish: A Network Analysis for the Fishery Management," presented by Johnson). CRM student Coley Hughes also gave a poster presentation, titled "Using Otolith and Water Chemistry to Determine Philopatry and Vagrancy of Striped Bass (*Morone saxatilis*) in the Albemarle Sound/Roanoke River Stock." The AFS national meeting is the largest fisheries conference in North America, attracting over 4,000 attendees ranging from fisheries managers in federal, state, and local agencies, as well as individuals representing non-profit, private industry, and academia. The conference always provides students with an excellent opportunity to disseminate information while collaborating with pioneers in our field of study.

The Centers for Ocean Sciences Education Excellence (COSEE) REEF forum was attended by CRM student Coley Hughes. The forum is designed to bring together researchers and professionals in education and media to improve communication and outreach of ocean sciences. The two-day workshop develops a community based on common interests in ocean sciences outreach. Scientists, graduate students, and educators from schools and science centers/aquaria come together with communication and media experts to share outreach formats that enhance public understanding of complex science topics.



Ph.D. student Coley Hughes (ECU) demonstrates otolith removal from striped bass for high school students during an outreach event sponsored by NC Seagrant. Dr. Roger Rulifson and Coley Hughes received a North Carolina Sea Grant Fisheries Resource Grant of \$19,890.15 for research on the topic of "What Determines High Strontium Levels in the Primordium of Striped Bass Otoliths?" The results of this project will impact future management estimations of abundance and spawning contributions made by anadromous and resident striped bass fish populations. Photo credit: E-Ching Lee (Managing Editor, *Coastwatch*; North Carolina Sea Grant).

South Dakota State University Subunit News

By: Andrew Carlson

The South Dakota State University (SDSU) Subunit of the American Fisheries Society is committed to community and university service as well as education and professional development of members. In the past year, the Subunit educated youth about aquatic resource conservation at a Fisheries Research Fun Day and Cub Scout Fishing Derby, events featured in the *Brookings Register*. Undergraduate and graduate students taught children about fisheries, aquatic ecology, and environmental stewardship. Subunit members also served as judges at a Cub Scout Pinewood Derby, acting as role models for the next generation of young adults. Through these service activities, Subunit members built lasting community relationships and embraced the critical human component of natural resource management.



South Dakota State University Subunit members educated youth and families about aquatic resources and environmental stewardship at the annual Cub Scout Fishing Derby in September 2012.



Brookings-area youth learned about aquatic resources and angling at the annual Cub Scout Fishing Derby in September 2012.

At the university level, Subunit members formed partnerships with other environmental organizations (Wildlife and Fisheries Conservation Club, Ecology Club) to pursue mutual goals. The Subunit also joined forces with the SDSU PREXY Council to foster student engagement in campus organizations. Members submitted a mission statement and summary of activities to the 2013 SDSU Yearbook, the first in more than a decade. The Subunit hosted a Natural Resource Management Job Fair to provide undergraduate students across disciplines with valuable information about summer internships with state, federal, and university employers. Subunit members also invited two natural resource pro-

professionals (Kristen Grohs, USFWS; Dr. Quinton Phelps, Missouri Department of Conservation) to speak with students about their research. Finally, the Subunit funded four scholarships for undergraduate travel to the Annual Meeting of Dakota Chapter of AFS, an important research and networking event.

The SDSU Subunit is dedicated to natural resource conservation and community involvement alike. In recognition of these commitments, the Subunit earned an Award for Organizational Leadership from the South Dakota Board of Regents in April, its first major university accolade. Members are looking forward to new service activities and time-honored

traditions as the year progresses. Events for Fall 2013 will include youth education, community service, professional workshops, and an undergraduate-graduate student mixer event.

Stay tuned for more information about the SDSU AFS Subunit!



The SDSU Subunit funded Sauger Scholarships for undergraduate student travel to the 2013 Dakota Chapter meeting of the American Fisheries Society in Bismarck, North Dakota. Scholarship winners were Aaron Burgad (second from left), Dalton Benage, Aaron Andrews, David Bogner, and Anthony Rodger.

Purdue Subunit News

By: Samantha Thiede

Members of the Purdue Chapter of the American Fisheries Society had quite a busy and successful year! As we strived towards bettering our members academically we hosted a number of opportunities to educate our members on the importance of fisheries scholastics. We held a graduate student panel in which undergraduates could listen to graduate students speak over the topics of "How to Apply for Graduate School", "What to Expect in Graduate School", and various other related topics. We held a question and answer session to allow undergraduates to ask the panel questions. We also had our advisor, Dr. Tomas Hook, present to us on the topic of creating a resume and what to expect when applying for jobs. We had various speakers throughout the year, such as Carolyn Foley from Sea Grant and Tom Bacula from the IDNR.



Members had the opportunity to get hands on experience in the field. In early fall, members participated in a mark-recapture study in Purdue's Martel Pond using fyke nets. Two fyke nets were set overnight in Martell Pond and retrieved the following morning by members. Students clipped the tip of the anal fin and released the fish back into the pond. All fish found were green sunfish. In spring, members worked with Dr. Goforth and Allison Coulter with electrofishing and gill netting in the Wabash River. This not only provided a great opportunity to work with new gears but allowed members to handle and view fish in which they were studying in their current courses.

We participated in this year's state IAFS meeting in which some members presented posters about their current research during the social and were able to answer questions asked by other students and colleagues.

Outreach also played an important role in this year's agenda. Purdue AFS held its Third Annual Sturgeon Spawning Walk/Run 5K. Each year, in Tapawingo Park, Purdue AFS holds this event to bring light to the public about the endangerment of shovelnose sturgeon due to poaching. Purdue AFS also participated in Purdue's annual Springfest, an event that draws in hundreds of students and alumni. Purdue AFS used this event to educate the public about Purdue AFS and natural resource topics.

This summer, the organization secured a grant that will provide for the launch of a long-term monitoring program stationed at the University's retention pit, Harrison Pond. The program aims to monitor water quality on a weekly basis, and broadcast this information via the Purdue AFS website. Annual sampling events will also be conducted in order to evaluate the pond's zooplankton, macroinvertebrate, and fish communities. Sampling is scheduled to begin in August, and will continue throughout the fall.

AFS-OC Student Subunit News

By: Lee Gutowsky

AFS-OC (Student Subunit of the Ontario Chapter) students had a strong presence at the 2013 Canadian Conference for Fisheries Research (CCFFR) in Windsor. The Subunit delivered presentations, networked, and relaxed in the professional atmosphere that we've come to enjoy about CCFFR. In addition, the AFS-OC Subunit hosted a student colloquium that received strong attendance (~80 participants) by both fisheries professionals and students. Fisheries Society of the British Isles (FSBI) Treasurer Dr. Gordon Copp began the event with a presentation on the FSBI/CCFFR student exchange program. Next, the panel of experts fielded questions from the audience. Some of their sage advice included:

- It is an asset to attend different academic institutions
- Augment your resume by obtaining specialized tools that you can offer to your employer, such as having specialized or additional training in GIS, genetics, etc.
- Volunteer with an assortment and diverse number of organizations, and not just in fisheries
- If you admire a particular individual and/or company, write them a letter stating that you want to volunteer for them and/or participate on their research, etc.
- Mobility is an asset in the natural resource sciences field, for example there are many job opportunities in the north.

- Get involved and become a member of professional societies, e.g., American Fisheries Society.
- Consider consulting as a rewarding career choice!
- Write a phenomenal cover letter addressing how you meet the qualifications for that job.
- On your resume, include all transferable skills obtained from previous volunteer or employment experience.
- The exact same wording from the job description should be in your cover letter. Remember that the first person to sort through the pile of resumes will likely be from human resources and will be looking for those exact words from the job description.
- Include references in your resume/CV, not "References available upon request"! Be sure to ask for permission and a favorable letter from your references!
- Work on getting exceptional grants, for example the Great Lakes Fisheries Trust.
- Be conscious of having accountability at all times.
- Accept that you might start with biologist positions and eventually work your way up into federal agencies and research scientist positions.
- Producing exceptional technical reports will improve your chance of earning new and longer contracts. Exceptional reports also open doors to new and more desirable jobs.
- Continuously build your skills and resume by participating in workshops, events, conferences; even on your own time. Also accumulate additional certifications and/or licences.
- Learn to be adaptive and don't be afraid to reinvent yourself!

Thanks to Professor Lynda Corkum (University of Windsor), Jason Barnucz (DFO), Dr. Nigel Lester (OMNR), John Fitzsimons (Golder Associates Ltd.), and Dr. Jon Midwood (Post Doc, Fish Ecology and Conservation Physiology Lab) for sharing their perspectives and advice.



2013 Ice-Fishing Derby

This past winter marked the first Subunit ice fishing derby at the AFS-Ontario Chapter Annual General Meeting. During a break, approximately 25 AFS-OC members took to the ice to target yellow perch. Congratulations to this year's winner, Sarah Steele, and to everyone who participated in the event. We're certainly looking forward to next year's derby.

Outreach

We have been helping to organize volunteers and execute a tree/shrub planting program at a local creek in Ottawa, Ontario. So far the program has been a great success. More information on this project can be found on our website (www.afs-oc-subunit.org) and the Watts Creek blog (<http://wattscreekrestoration.blogspot.ca/>).

The subunit has also been busily updating our website and tweeting current news about fish, fisheries, politics, and science. Follow us on Twitter: @afs_oc_su. Finally, we have put together a blog where students can share interesting, funny, and shocking stories about their field work (<http://overlyhonestmethods.blogspot.ca/>).

Palouse Student Subunit Focuses on Field Experience and Agency Connections

By: Steve Whitlock

In 2012, the Palouse Unit maintained its tradition of collaborating with state and federal natural resource agencies and assisted in several new research and monitoring projects. Idaho Department of Fish and Game invited the Palouse Unit to participate in hook-and-line sampling of white sturgeon *Acipenser transmontanus* in Hells Canyon for the sixth consecutive year. Members learned about the lake trout *Salvelinus namaycush* suppression program in Lake Pend Oreille and participated in removal efforts using gill nets and trap nets. Members also joined the U.S. Forest Service in bull trout *S. confluentus* redd surveys on tributaries of the St. Joe River.



Members sampling white sturgeon in Hells Canyon.



Lifting commercial trap net with Idaho Department of Fish and Game.

The subunit is expanding its focus to include continuous research and monitoring projects in addition to periodic field visits. Over a period of two months, members volunteered each weekend to check a floating PIT tag array and weir on the Potlatch River. Assisting with ongoing research projects like this gives students more field experience and a better sense of the daily tasks performed by fisheries professionals. Extended projects also provide a greater benefit to agencies because students do not need to be trained each time they volunteer. The Palouse Unit hopes to participate in another extended research project in Crab Creek in 2013 with the support of the Washington Department of Fish and Wildlife.

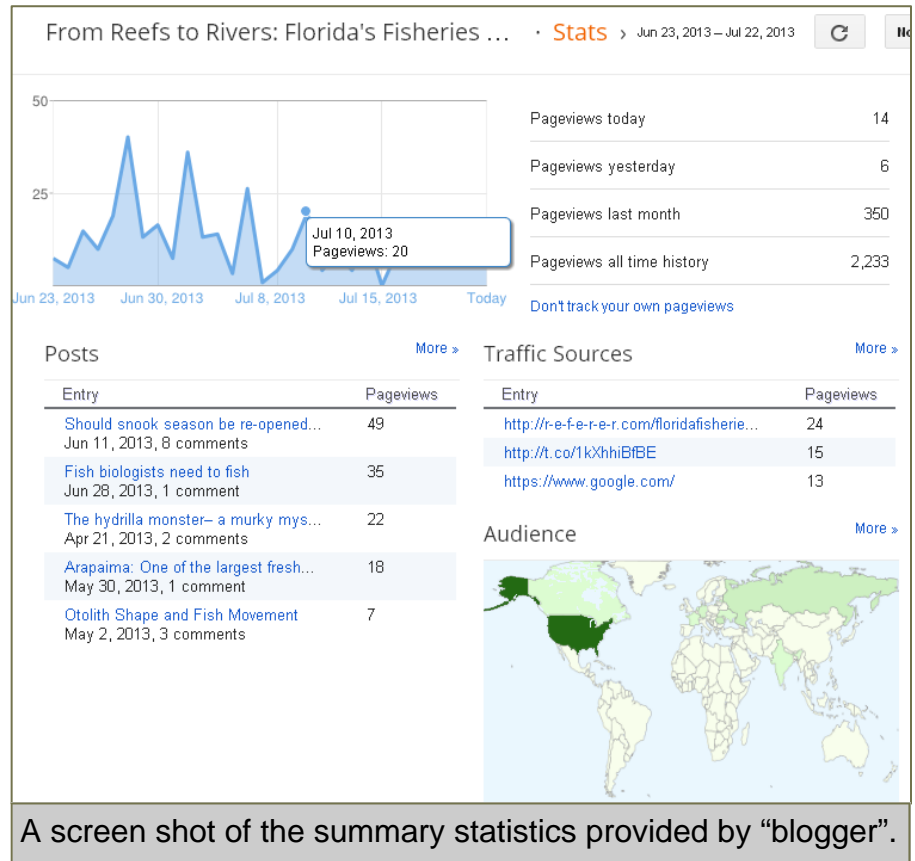
Florida Student Subunit News: Using Social Media to Get the Word Out

By: Ross Boucek

The evolution of electronic social media has changed how many of us receive and exchange information. For instance, many now get news from facebook, twitter, google +, and various websites and blogs. Communicating on these new forums is much different than the traditional types of media. Information conveyed on these sources are accessible to millions almost instantaneously, are written to be concise (in some cases 150 characters or less), and are interactive. Within the realm of science communications, these media sources can become powerful tools.

Blogs are one of these social media tools that have recently been integrated into science communication strategies, and have quickly proven to be a very effective way to get your message out to the public. A blog is a website that individuals can regularly record opinions and information that can be viewed by anyone. Blog posts are short stories about research (often under 500 words), use informal language, and often include visual aids. These stories can be written, or in other more creative cases, done in a video formats (check out this post about otoliths <http://www.youtube.com/watch?v=IT4XooWuu7s>). One of the great advantages of using blogs as outreach tools is that they track the viewership frequency of each story and the basic demographic information about your viewers. This bit of readership information can go a long way in helping you figure out which writing styles and topics are most popular.

The Student Subunit of the Florida Chapter of the American Fisheries Society has just launched a fisheries science blog (<http://floridafisheresscience.blogspot.com/>). The blog is a product of collaborations among 5 graduate students located at 3 universities across the state of Florida. Since its inception in April, the FL AFS blog has published 11 blog posts that have reached over two thousand views from viewers across the globe.



A screen shot of the summary statistics provided by “blogger”.

We urge other Subunits to pick up the pen and start using these new media sources. For those who may be interested in writing, using these media outlets can be a great way to better your writing skills and provides you with easy to access writing samples that you can send to potential employers.

Those that may already be active bloggers or have some presence on other social media, contact us on the blog so we can integrate your great work with ours!

From Reefs to Rivers: Florida's Fisheries Science Blog

Graduate researchers accounts of current Fisheries research in Florida

Home Purpose The Bloggers Sites we like Fisheries publications

Friday, June 28, 2013

Fish biologists need to fish

Fisheries science holds profound ramifications for the future of fish in our lakes, rivers, estuaries and oceans. In Florida where 31% of people consider themselves anglers, it is no wonder why everyone has an opinion on how and why fish should be managed. Most anglers agree that conservation of fish populations is a necessity, the questions arise in the best way to do that (e.g. regulations) and how scientists arrive at management decisions. Questions turn to distrust and doubt when the communication gap between scientists and the public is not breached.

Fisheries science is prone to criticism. First, it is not an exact science. Models provide projections and population estimates. Second, models aren't well understood by the public (and I dare say many scientists) due to their complexity. Models often change or are replaced over time as the science evolves and adapts to include new statistical theory and methodology. Change, in all aspects of life, can be difficult to accept. Opaque reasons for change cause anglers to hold fast to old-fashioned but comfortable management and data collection methods. For example, Catch Per Unit Effort (CPUE) is a straightforward, traditional measurement of abundance and is easily understood by scientists and the public. However multiple studies on collapsing stocks have shown that CPUE may remain high as the population declines (e.g. Erisman et al. 2011), prompting managers to rely on additional benchmarks for stock health. The Fishing Rights Association (FRA) lists this shift as an issue of concern- specifically that stock assessment models are ignoring standard benchmarks including CPUE. The FRA has gone so far as to hire their own scientists to prove federal regulators wrong. The CPUE conflict exemplifies the difficulty of remaining cutting edge in fisheries science yet retaining the confidence of the public.

Read more >

Posted by Joy Young at 6:13 AM 1 comment: Recommend this on Google

Labels: anglers, bad science, CPUE, fish biologists, scientists

Tuesday, June 18, 2013

Michael and the Peppermints

From the field

Browse by author

- Chelsey Crandall (2)
- Crystal Hartman (2)
- Joy Young (1)
- Kyle Wilson (1)
- Ross Boucek (3)

Browse by topic

snook Ross Boucek Chelsey Crandall Crystal Hartman Largemouth bass electrofishing fish movements Amazon River basin CPUE FACT array Florida Gulf coast of Florida Hydrilla Joy Young Kyle Wilson VEMCO amazon fish amber jack anglers arapaima bad science bass bluegill bowfin brown hoplo catch and release fishing cold front diet study fish biologists fish

Home page of the Florida AFS student blog.

2013 Pacific Ecology and Evolution Conference

By: Eric Hertz

The 34th annual PEEC took place March 1nd to 3rd 2013 and was tremendously successful! The University of Victoria's Department of Geography and Biology hosted PEEC 2013 and this year conference participants came from several local universities including the University of British Columbia (UBC), Simon Fraser University (SFU), the University of Victoria (UVic), and Vancouver Island University (VIU). Some intrepid participants even came from as far away as Alaska and Alberta!



The Pacific Ecology and Evolution Conference (PEEC) is an important early-career conference organized by graduate students for graduate students based in the Pacific Northwest studying in ecology, biology, and conservation-related fields. This conference provides a forum for presenting current research and gives students an excellent opportunity to make contacts, obtain feedback, and exchange ideas with peers. The remote setting of the conference, held at the Bamfield Marine Sciences Centre (BMSC) on the west coast of Vancouver Island, allows attendees to network with peers and immerse themselves in a dynamic coastal environment at a unique and world-class teaching and research facility.

This year, 59 attendees presented their scientific findings or research proposals orally and 21 attendees shared poster presentations. Several sections of talks were held at PEEC 2013, ranging in topic from fisheries management and marine conservation to terrestrial ecology and animal behavior. Participants were able to listen to talks ranging from how hermit crabs scuttle around turns in a maze from Alexandra Kinny and Maia Ludwig-Ives (UVic) to understanding human behavior by analyzing hunting photographs from Rosie Child (UVic). Congratulations to Justin Suraci (UVic) for his winning presentation on predator release and the role of fear in determining the impacts of introduced mammals. Honorable mentions went to Kyle Empringham (SFU) for his talk "Marine Conservation in Nonprofits: An 'audit' of advocacy and outreach campaigns" and Josh Silberg (SFU) for his presentation "Indirect effects of sea otter recovery on reef fish".



A wonderful evening in the Rix Center for Ocean Discovery conference facility saw the walls plastered with posters. Everyone was able to circulate and speak to presenters and ask questions about individual research projects. While each poster was worthy of an award, Best Poster Presentation went to Sarah McArthur (UVic) who presented her research on monitoring terrestrial breeding birds in Yoho. Honorable mention went to Christina Suzanne (UVic) and her research on water systems in northern Alberta watersheds.

Attendees of PEEC 2013 had the privilege of hearing Dr. Julia Baum and Dr. Frances Juanes give plenary talks. Dr. Baum is an associate professor with the Department of Biology at UVic and her talk was titled “Sharks on Coral Reefs: How Much Have We Lost and Does it Matter?” This talk highlighted the broad topics of research in ecology and biodiversity, and included the work currently being done by her graduate students in Canada and in Kiribati. Dr. Frances Juanes is the Liber Ero Chair for Fisheries at UVic. His talk, “Listening to Fish” provided a fascinating glimpse into the sounds produced by different fish species, what this unique behavior may communicate, and how it can be applied in conservation of fisheries.

Overall, PEEC 2013 was a huge success and would not have been possible without a lot of support. In particular, we thank our sponsors, including the Education Section of AFS, our keynote speakers, the staff at BMSC, and all of the attendees.

2013 Great Plains Fisheries Student Colloquium

By: Kristopher Stahr

On February 15th and 16th, 2013 the Oklahoma State AFS Student Subunit hosted the first annual Great Plains Fisheries Student Colloquium. The event was held at the University of Oklahoma Biological Station situated on beautiful Lake Texoma. On Friday Feb. 15th, a dinner was hosted and students were encouraged to discuss research with fellow attendees. Following dinner, Dr. Jim Long from the Oklahoma Cooperative Fish and Wildlife Research Unit gave the keynote presentation entitled “Human Perceptions and Aquatic Conservation”. Dr. Long’s presentation was very well received by all those who attended. After the keynote presentation a social was held at the Biological Station for all attendees.



The following morning, breakfast was served by the OU Biological Station before student presentations. Over 15 students (including undergraduate and graduate students) from four different universities attended the colloquium and had a diverse array of presentations. Several students gave their first oral presentation at the colloquium and all did a fantastic job. Topics ranged from trophic ecology of channel catfish to movement and survival of juvenile American alligators.

Overall the colloquium was a huge success and participants enjoyed the diversity of presentations as well as picturesque Lake Texoma. We would like to thank both the Education Section of AFS and the Oklahoma Chapter of AFS for providing funding for this event; we could not have had such an amazing event without their help. Thanks also to all those who helped coordinate and organize the event, especially all of the staff at the OU Biological Station.



Kristopher Stahr can be reached at stahr@ostatemail.okstate.edu.

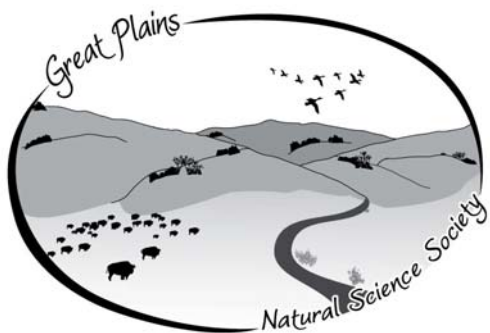
Modeling Patterns and Dynamics of Species Occurrence Workshops March 10-14 and March 17-21, 2014

**Great Plains Natural Science Society &
Department of Natural Resource Management at South Dakota State University**

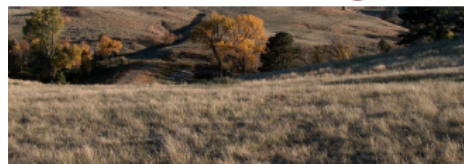
The Great Plains Natural Science Society and the Department of Natural Resource Management at South Dakota State University will be hosting two Modeling Patterns and Dynamics of Species Occurrence workshops in Brookings, SD. The 4.5-day workshops will be presented by Dr. Darryl MacKenzie at the Swiftel Center. Space is strictly limited for each workshop. The workshop will cover many of the latest methods for modeling patterns and dynamics of species occurrences in a landscape while accounting for imperfect detection of the species. Participants will be introduced to available software through worked examples, and there will be special emphasis on aspects of study design. While primarily aimed at the beginner and intermediate level, more experienced researchers will also benefit from attending. Topics to be covered include:

- single-season occupancy models for patterns in species occurrence
- building predictive models of species occurrence
- creating maps of species occurrence probabilities, e.g., species distribution maps
- multiple-season occupancy models for dynamics of species occurrence and changes in distribution
- important study design considerations
- sample size determination

Please contact Dr. Troy Grovenburg (troy.grovenburg@sdstate.edu) or visit <http://www.sdstate.edu/nrm/organizations/gpnss/> for additional information and registration details.



**Department of Natural Resource
Management**



**South
Dakota State University**

Are you interested in becoming more involved with the Student Subsection?



The Student Subsection of the Education Section seeks outstanding individuals that are interested in becoming leaders in the American Fisheries Society. Candidates needed for the Student Subsection include president-elect (2-year position; one as president-elect followed by one as president), secretary-treasurer, and division representatives (i.e., North Central, Northeastern, Southern, Western, Canadian). Please note that students near graduation or that have recently graduated can and are encouraged to hold an officer position.

Duties and responsibilities for each of the officers and the division representatives can be found in the Procedural Manual of the Student Subsection on the Student Subsection's website (<http://www.fisheriessociety.org/edustu/membership/index.php>).

If you are interested in becoming more involved or simply have questions, please contact Jeff Fore – jfore@tnc.org. If you wish to nominate yourself or a qualified candidate, please send a brief biography that highlights the candidate's AFS involvement and plans for the nominated position.



LITTLE ROCK - 2013

2013 AFS Annual Meeting: Education Section Events

(Note: Time and location are subject to change)



LITTLE ROCK - 2013

Date	Time (PM)	Event	Location	Room
Sunday, September 8	5:00 - 7:00	Education Section Meeting	Little Rock Marriott	Grampus
Monday, September 9	2:00 - 4:00	Student Colloquium/Mentor Event	Little Rock Marriott	Arkansas Ballroom
Tuesday, September 10	12:00 - 1:30	Education Section Judges' Luncheon	Little Rock Marriott	Neosho
		Best Student Paper & Poster		Arkansas Ballroom
	12:00 - 3:00	Judges' Luncheon	Little Rock Marriott	Arkansas Ballroom
		Student Subsection Business Meeting	Little Rock Marriott	Ouachita
	3:30 - 4:30		Statehouse Convention Center	Statehouse D
	3:30 - 5:30	AFS Business Meeting		Arkansas Ballroom
	5:00 - 6:30	Student Career Fair	Little Rock Marriott	Arkansas Ballroom
	6:30 - 10:00	Student Social (Students Only)	Museum of Discovery	--

Looking for Acid Rain Literature?

Dr. Robert C. Summerfelt would like to give away a large collection of reprints and reports on the topic of acid rain. The collection has not been cataloged, and would fill nearly three drawers of a file cabinet.

If you are interested in acquiring this literature, please contact Dr. Summerfelt.

Dr. Robert C. Summerfelt, Emeritus Professor
Department of Natural Resource Ecology and Management
Sciences 2, Room 339
Iowa State University
Ames, IA 50011-3221

Telephone: 515-294-6107
E-mail: rsummerf@iastate.edu

2014 Aquatic Resource Education Association Conference

The Michigan Department of Natural Resources, Education Services Section will be hosting the Aquatic Resource Education Association National Conference on October 26 - 30, 2014 in beautiful Traverse City in northern Michigan at Park Place Hotel.

The conference is designed for fisheries and educational professionals from state, federal, and industry sectors involved in aquatic resource education programs.

For more information see links at www.areanet.org/.



Undergraduate Student Travel Award!

Sponsored by Student Subsection and the
Education Section of the American Fisheries Society

**Attn: Advisors and
Graduate
Students**

For more information contact:
Cari-Ann Hayer
cari-ann.hayer@sdstate.edu

The Undergraduate Travel Award is designed to introduce undergraduate students to AFS at the Parent Society level and increase participation of undergraduate students in AFS.

The award provides **\$500** for expenses associated with student attendance at the 2013 Annual Meeting of the AFS in Little Rock, Arkansas, September 8 – 13, 2013.



Apply by August 9, 2013 for a chance to receive an award. Applications can be found at www.fisheriessociety.org/edustu

Summer Reading List

Bower, J. R., and G. Ishimura. 2012. Four suggestions to improve fisheries education programmes in developing countries. *African Journal of Aquatic Science* 37:225-227.

Lauer, T. E. 2012. Improving the learning process for both instructor and student using assessments. *Fisheries* 37:76-79.

Myrick, C. A., Z. E. Underwood, and K.-D. Kinzli. 2013. Supporting undergraduate education with realistic laboratory exercises and research experience. *Fisheries* 38(4):160-168.

Seitz, A. C., K. M. Straub, and T. M. Sutton. 2012. Recruiting the next generation of fisheries professionals. *Fisheries* 37:80-83.

Have you read an interesting article lately?

Please send citations of articles or links to interesting information to the newsletter editors (Cari-Ann Hayer cari-ann.hayer@sdstate.edu and Landon Pierce llp5yc@mail.missouri.edu).

Education Section Elections



WIN A FREE SHIRT!!!

It's an election year and your vote counts!

Participating in the Education Section election is important and all members are encouraged to vote for President-Elect and Secretary-Treasurer positions. Members of the Southern and Western divisions will also elect representatives to serve on the Executive Committee. As an incentive to vote, we will be holding a raffle for Education Section t-shirts and AFS Little Rock meeting t-shirts. Winners will be announced and presented a t-shirt at the Education Section business meeting (winner need not be present to win). Please read through the biographical sketches on the following pages for each of the President-Elect and Secretary-Treasurer candidates and for the representative position in your Division. We've included a sample ballot below. **An official ballot and voting instructions will be sent out by e-mail to all members. Elections will close on August 23, 2013.**

Sample Ballot:

President-Elect (All members, vote for one)	
<input type="checkbox"/>	Katie Bertrand
<input type="checkbox"/>	Write-in:
<input type="checkbox"/>	
Secretary-Treasurer (All members, vote for one)	
<input type="checkbox"/>	Tracy Galarowicz
<input type="checkbox"/>	Trent Sutton
<input type="checkbox"/>	
Southern Division Representative (Southern Division members only, vote for one)	
<input type="checkbox"/>	Matt Catalano
<input type="checkbox"/>	Brian Erwin
<input type="checkbox"/>	
Western Division Representative (Western Division members only, vote for one)	
<input type="checkbox"/>	Phaedra Budy
<input type="checkbox"/>	Write-in:

Please review the bios of each candidate and decide which of the candidates you think is most qualified for the position. **Remember that voting automatically enters you into the T-shirt raffle!**

Candidate Bios: President-Elect

(All members vote for one)

Katie Bertrand

Katie Bertrand has been an Assistant Professor in the Department of Natural Resource Management (formerly the Department of Wildlife and Fisheries Sciences) at South Dakota State University in Brookings, South Dakota for 5 years. Katie earned her B.A. in Biology and Environmental Studies from Gustavus Adolphus College in St. Peter, Minnesota, and her Ph.D. in Biology from Kansas State University in Manhattan, Kansas. Her research expertise is in studying the role of consumers in ecosystems, and she applies her expertise to address 4 common questions: how do consumers affect ecosystem structure and function, how can invasion and conservation biology inform management decisions, does functional redundancy exist, and ultimately, how might global change mediate consumer effects? Katie still views herself as a young professional, but she credits her dedicated graduate students for making her transition from student to professional a smooth one. Katie served as the major advisor for 3 excellent graduate students, who completed their theses in 2011 and 2013, and she currently advises 6 graduate students, who are in progress. She is an instructor (ichthyology, fish ecology, and stream ecology) and advisor for undergraduate Wildlife and Fisheries Sciences majors, and she mentors several undergraduate researchers each year in her research group. She served as the faculty advisor for the SDSU College of Agriculture and Biological Sciences Living and Learning Community from 2011-2012. Katie joined AFS in 2002. The following year, she joined the Education Section and the Student Subsection. Katie was a member of the Kansas Chapter from 2003-2007, serving as Secretary-Treasurer of the Kansas State University Student Sub-Unit in 2003-2004, and she has been a member of the Dakota Chapter since 2008. In 2013, she was awarded the Outstanding Young Professional Award by the Dakota Chapter. She served as President of the AFS Student Subsection of the Education Section from 2004-2005 and was awarded the Skinner Memorial Award in 2005, which recognizes students for outstanding service to AFS fisheries science. Katie Co-Chaired a Symposium at the 2005 AFS Annual Meeting and served on the AFS Membership Committee from 2006-2008. Currently, she is the Secretary-Treasurer of the Education Section and serves on the Skinner Memorial Award Committee. Katie belongs to 6 other professional societies, including the Great Plains Natural Science Society, in which she's been involved as a Council Member from 2008-2011. She also serves on the Partners Council and the Science Advisory Team of the Great Plains Fish Habitat Partnership. However, she considers AFS her professional home, and felt honored to be nominated to serve as President-Elect of the Education Section.

Candidate Bios: Secretary-Treasurer

(All members vote for one)

Tracy Galarowicz

Tracy Galarowicz is an Associate Professor in the Department of Biology at Central Michigan University. She received her B.S. in biology from St. Norbert College, M.S. from the University of Minnesota-Duluth, and Ph.D. from the University of Illinois at Urbana-Champaign. Her research area is ecology of freshwater fish with a focus on streams and the Great Lakes. Tracy has been actively involved with the American Fisheries Society since 1994 and values the knowledge gained and relationships developed through AFS. Besides regularly attending state, regional and parent society meetings, she has served the society through a number of committees including current participation on the AFS Membership Concerns Committee, Education Section co-chair of the 2011 Best Student Paper Symposium, North Central Division Representative of the Education Section, and as associate editor for Transactions of the American Fisheries Society. Her past AFS service includes participation on the TAFS subcommittee of the Publication Awards Committee and chair of the J. Frances Allen Scholarship Committee. Since coming to CMU, Tracy has taught fisheries and conservation courses at the undergraduate and graduate levels, incorporating relevant management and research issues into lecture and laboratory. In addition, she advises both undergraduate and graduate student researchers. AFS participation has truly been a rewarding experience for Tracy, and she would be pleased to serve as Secretary-Treasurer of the Education Section.

Trent Sutton

Trent Sutton is a Professor of Fisheries Biology and Chair of the Undergraduate Fisheries Program at the University of Alaska Fairbanks (UAF), where he has been a faculty member since 2007. He received a B.S. in Fisheries and Wildlife from Michigan State University (1991), M.S. in Biological Sciences from Michigan Tech (1993), and Ph.D. in Fisheries and Wildlife from Virginia Tech (1997). Prior to arriving at UAF, Trent was a faculty member at Lake Superior State University (1996-2001) and Purdue University (2001-2007). His research program focuses on developing a greater understanding of the role of biotic and abiotic factors on the population ecology and biology of freshwater and marine fishes to assist natural resource conservation and management efforts. Trent mentors both undergraduate and graduate students, and currently teaches three classes: fisheries management, freshwater fisheries techniques, and a first-year experience seminar in fisheries. He has also previously taught fish ecology, freshwater fish culture, ichthyology, fisheries population dynamics, and various graduate seminars.

Trent is a Certified Fisheries Professional and a life member of AFS, first joining the society in 1989. He has been active in AFS, serving as an Associate Editor for *Transactions of the American Fisheries Society*, President of the Virginia Tech, Indiana, and Alaska Chapters of AFS, chair of the Education Subcommittee of the AFS Board of Professional Certification, and faculty advisor for AFS student subunits at Lake Superior State University, Purdue

University, and UAF. In addition, he has served as a member on numerous Education Section and AFS committees, including the Excellence in Fisheries Education Award Committee, Skinner Memorial Award Committee, Continuing Education Committee, Publications Overview Committee, Resolutions Committee, and Time and Place Committee. Trent was one of the co-editors (along with Al Zale and Donna Parrish) for the recently completed *Fisheries Techniques, Third Edition*. Trent has maintained a strong lifelong commitment to fisheries education and was recognized by AFS in 2012 for his contributions with the Excellence in Fisheries Education Award. He has been the primary advisor for over 30 graduate students and has mentored over 60 undergraduate student research projects. Trent has also served as a mentor for seven high school students, with five of these individuals being participants in the AFS Hutton Junior Fisheries Biologist Program. At each of the three universities where he has been a faculty member, he has been active in fisheries curriculum development and has served on various university- and college-level curriculum review committees and undergraduate general education core review committees. At UAF, he serves as a member of the steering committee for the Undergraduate Research and Scholarly Activity Program and has recently been appointed as the head of the School of Fisheries and Ocean Sciences Retention and Student Success Program. Trent has immensely enjoyed working with students and faculty and staff colleagues over the years on the aforementioned education initiatives and greatly looks forward to continuing his involvement in fisheries education-related activities at UAF and within AFS.

Candidate Bios: Southern Division Representative

(Division members only; vote for one)

Matthew Catalano

Matt is currently an Assistant Professor in the School of Fisheries, Aquaculture, and Aquatic Sciences at Auburn University. He specializes in fish population dynamics, fisheries management, stock assessment, and quantitative modeling of fish populations. He worked as a post-doctoral research associate at the Quantitative Fisheries Center, Michigan State University, where he studied Alaskan salmon stocks, bighead and silver carp in the Illinois River, and Lake Erie walleye stock assessment and management. Matt completed his Ph.D. work at the University of Florida in 2009 studying the dynamics of gizzard shad populations in eutrophic Florida lakes. While at Florida, he served as president of the student subunit of the Florida Chapter of AFS. He received his M.S. degree at the University of Wisconsin - Stevens Point where he studied fish community responses following dam removal. Matt has also worked for the Illinois Natural History Survey in central Illinois and for the National Park Service at Yellowstone National Park. He completed his B.S. degree in zoology at Miami University in Oxford, Ohio. Matt is from Lorain, Ohio, and grew up on the southern shore of Lake Erie where he spent many hours fishing for walleye and smallmouth bass.

Brian Irwin

Brian Irwin is the Assistant Unit Leader – Fisheries at the Georgia Cooperative Fish and Wildlife Research Unit and a member of the Graduate Faculty at the University of Georgia, where he has an adjunct appointment with the Warnell School of Forestry and Natural Resources. His research interests include fish population dynamics, quantifying ecological changes, and decision making linked to conservation and management of natural resources. He received his B.S. from the University of Illinois, M.S. from Auburn University, and Ph.D. from Cornell University. Prior to joining the U.S. Geological Survey in 2012, he worked at the Quantitative Fisheries Center at Michigan State University. At all of these institutions, he has been involved with local AFS chapters, including serving as treasurer and vice president for the Auburn Chapter. In fact, his initial introduction to fisheries science was through an event hosted by the student subunit at the University of Illinois. He frequently attends local, regional, and parent-society AFS meetings, and he was a recipient of the Skinner Memorial Award at the 2005 meeting in Anchorage. He regularly serves as a scientific reviewer and has published in AFS journals, including Transactions of the American Fisheries Society, North American Journal of Fisheries Management, and Fisheries. He has served as a research advisor for both undergraduate and graduate students and has taught University courses in Fisheries Management and Conservation of Exploited Fish and Wildlife Populations. In addition, he has taught short courses on using AD Model Builder to students and professionals. He currently teaches a graduate course in Quantitative Conservation Science. Having been a member of AFS for over a decade, Brian is excited about opportunities to serve AFS in the Education Section and helping to promote opportunities to students in our profession.

Candidate Bios: Western Division Representative

(Division members only; vote for one)

Phaedra Budy

Phaedra Budy is a Professor in the Department of Watershed Sciences and Unit Leader of the Utah Cooperative Fish and Wildlife Research Unit, at Utah State University (USU), Logan UT. She completed a B.S. in Limnology at the University of California, Davis and a Ph.D. at Utah State University in aquatic ecology. She then completed a post-doctoral fellowship at the Luquillo Experimental Rain Forest, part of the Luquillo Long Term Ecological Research site in Puerto Rico, working on amphidromous shrimp population genetics. In her fish ecology lab, she and her graduate students and staff do research that fits into an overall framework of evaluating the factors that structure and limit fish populations in both lentic and lotic systems. They work broadly in the conservation biology, invasion ecology, and food web dynamics of aquatic systems with an emphasis on fishes. Current research covers a wide geographical range including almost all of Utah (from the south of the state up to high elevation points in the Bear River drainage), Oregon and Washington and arctic Alaska and includes many species of salmonids, imperiled native desert fishes (the "three species"), and numerous warm water lentic fishes. They also dabble in stream restoration and large river management. Phaedra has demonstrated commitment to education and mentoring as well as to profession-

al service. She sits on many graduate committees, has completed 18 graduate students (both M.S. and Ph.D.), and she mentors many undergraduate researchers each year. She served as the President of the Utah Chapter of the American Fisheries Society (UAFS; a four year appointment) from 2003-2006, and she was an *Associate Editor* for North American Journal of Fisheries Management from 2006-2008. She rotates on and off with a different faculty every other year in serving as the faculty mentor for the USU Student Sub-Unit of UAFS. In 2009, she was awarded the Utah State University, College of Natural Resources, Teacher of the Year, and in 2008 she was elected the UAFS, Scientist of the Year (for 2007). She has taught many short courses for Utah fishery professionals including population assessment, and introduction to mark-recapture analyses, and bioenergetics. She and her graduate students regularly attend and present at Utah AFS, Western AFS, and National AFS annual meetings.

Editors' Notes

Feel free to contact us with suggestions and comments. We would like to encourage submissions and generate ideas for next issue of the newsletter (January 2014). Contributions, comments and suggestions may be emailed to either of us at any time.

Sincerely,

Cari-Ann Hayer
South Dakota State University
Box 2140B. NPB 138
Brookings, South Dakota 66502
cari-ann.hayer@sdstate.edu

and

Landon Pierce
Missouri Cooperative Fish & Wildlife Research Unit
302 Anheuser-Busch Natural Resources Building
University of Missouri
Columbia, Missouri 65211
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