FITS

FISHERIES INFORMATION AND TECHNOLOGY SECTION

http://www.fishdata.org

Upcoming Events

Meetings

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President's Byte

Submitted by Jodi Whittier

Hi section members – This is my last pres byte. I am thrilled with the progress that has been made to revamp the role of FITS to better support the needs of the AFS membership. The original intent of our section was to facilitate the use of computers and computer software. Today that role is obsolete.

The FITS Executive Board has been revising the role of FITS for several years and we made some great changes in the last year. Visit our website and like us on facebook! To learn more about the changes to our website, check out page 5.

I have really enjoyed serving as President of FITS and learning the inner workings of AFS.   As I transition to my role as Immediate Past President I am looking forward to assisting your next Section President, Thom Litts, and know that he will continue rewriting our role in the AFS society. I invite you to attend our business meeting in Little Rock, Monday, Sept. 9, 2:30 – 3:30 in the Grampas room of the Little Rock Marriott.

Thank you, Jodi!

Candidates 2013–2015

Description of Positions

The **President-elect** advances to President of FITS after 2 years (i.e., 2015). As President, you are not only the leader of a Section that now numbers over 600 fisheries professionals and students, but you serve on the AFS Governing Board, thereby helping to shape policy for the Society as a whole.

The **Secretary-Treasurer** is the primary record keeper for the Section. This position involves keeping the financial books and assembling official summaries of activities for the Section, filing appropriate tax forms and reports to the IRS, and managing federal grants and contracts with which the Section may be involved.

For President-Elect

Julie Difilippi

Miss Julie Defilippi has been a Data Coordinator for the Atlantic Coastal Cooperative Statistics Program (ACCSP) for six years. Her primary responsibilities include providing quality control, oversight and coordination for Partner data feeds and technical support for end-user data requirements. She aids users in accessing the Data Warehouse, performs custom data requests and participates in data intensive activities such as stock assessments. Miss Defilippi is the staff person for the ACCSP Biological Review Panel and Bycatch Prioritization Committee.

Miss Defilippi has worked at the New England Aquarium as a research assistant on the Green Sea Turtle Hearing Project and as an environmental educator. She did her undergraduate work at Boston University and graduate work at the University of Maine. Ms. Defilippi is currently the FITS Communications and Outreach Coordinator and has been a member of AFS for nearly a decade.

Rebecca Krogman

Rebecca Krogman has been the Warmwater Specialist for the Lake and Reservoir Management and Research Program at California Department of Fish and Willdife for about one year. She provides assistance and consultation to lake and reservoir managers in the program, as well as leading her own fisheries research. She is currently developing standard operating protocols for field work, including standardized sampling methods, for the program's warmwater research, and she is the primary liaison to IT for several databases under development.

Rebecca recently completed her M.S. in Fisheries Science at Mississippi State University, where she served as Subunit President 2011-2012. She completed her B.S. at Iowa State University, where she served as Subunit President from 2009-2010. She has served the Fisheries Information and Technology Section as its newsletter editor since 2010.

Candidates 2013–2015

For Secretary-Treasurer

Andrew Loftus

Andrew Loftus is a natural resources consultant specializing in natural resources policy, communication and information exchange. With a training (MSc) in fisheries management, he has more than 25 years of experience that includes working with data management programs at the federal and state levels throughout the United States. For more than a decade, Loftus has worked toward the development of the Multi-State Aquatic Resources Information System with state and federal agencies in the Midwest/Northeast, serving as project coordinator and facilitator (www.marisdata.org) . He has extensive experience providing technical facilitation between state and federal agencies and working with diverse user groups. He was instrumental in the 1998 *Freshwater Fisheries Database Summit* which brought together representatives of 46 state natural resources agencies; was the principal facilitator for the 2002 *National Fish and Wildlife Database Summit;* and was a key member of the steering committee for the *2006 National Fisheries Data Summit* to address data sharing needs of the National Fish Habitat Initiative (see www.fishdata.org for conference summaries).

He has extensive experience and background in the Chesapeake Bay region, having served as member and chair of the Citizens Advisory Committee to the Chesapeake Executive Council (a multistate gubernatorial advisory committee on Chesapeake Bay issues) for more than eleven years. In this capacity, he also served on numerous committees of the Chesapeake Bay Program addressing living resources, data management, and budgetary issues. He served on early committees of the Atlantic Coastal Cooperative Statistics Program (ACCSP) and more recently has conducted reviews and outreach projects for this program (for summaries, see http://www.andrewloftus.com/solutions.html). He has also conducted projects for the Atlantic States

Marine Fisheries Commission, the National Marine Fisheries Service Office of Sustainable Fisheries and Office of Constituent Services, U.S. Geological Survey NBII Program, Michigan State University, Conservation Management Institute at Virginia Tech, U.S. Fish and Wildlife Service, U.S Forest Service, and multiple nonprofit organizations and private companies.

Loftus previously served for seven years as the Director of Science for the American Sportfishing Association/Sport Fishing Institute and as the Managing Director of the FishAmerica Foundation, an international grassroots granting organization. Loftus received a Master of Science degree in Fisheries and Wildlife Management, specializing in fisheries population dynamics, from Michigan State University in 1986.

He serves as the Secretary/Treasurer of the Fisheries Information and Technology Section and member of the Electronic Services Advisory Board of the American Fisheries Society and is a founding member of the Data and Science Committee of the National Fish Habitat Action Plan. He has a strong working relationship with many of the state and federal agencies and academic institutions that will be integral to the successful completion of this project.

Election Details

The election will be held via online ballot from July 27, 2013 until August 10, 2013. In order to cast your ballot please visit the following link. https://www.surveymonkey.com/s/VSZTBMN

FITS Officers 2011-2013

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Fishdata.org Respawned!

Submitted by Thom Litts, President-Elect

The http://www.fishdata.org transition is now live. We want to thank everyone who took the time to review the site and provide comments. We also want to let you know that response to the poll to develop a blog met with a resounding YES, but the vote count was low. So over the coming months we will work to identify a blogger(s) and topics deemed of interest to the Section and Society and make a decision whether/how to proceed.

Now that the site is live, we will also work to develop regular news flashes highlighting the Section's activities and opportunities available to Section and Society members. It is easy to stay informed, just subscribe to the News RSS feed while visiting the site.

If you have information you would like to contribute, suggestions or are interested in participating in the ongoing development of the website, please to drop us a line at http://www.fishdata.org/contact. Check out your new website if you haven't had the chance and be sure to Follow/Like Us on Facebook at: https://www.facebook.com/AFSFITS.

Already using social media?

So is FITS! Like us on Facebook.

Social Media Survey

Submitted by Julie Difilippi, Media/Outreach Coordinator

Survey: How are AFS members using social media?

We don't know...yet! Social media has revolutionized communications with the incarnation and proliferation of weblogs, social networking, community media sites, Wiki's, microblogs and supporting mobile applications. The Fisheries Information and Technology Section, in collaboration with the Electronic Services Advisory Board, is interested in how professional and student members of the American Fisheries Society are using social media for personal and professional communications.

We have developed a survey that will be distributed to AFS members this summer. Please take the time to respond. The survey focuses on individual use of social media to determine which social media tools are most commonly used, frequency of use, and applications.

The results of this survey will tell us how the Society's members currently use social media and provide pathways for more effective and timely communications through social media in the future. We will be presenting these results at the social media symposium that we are sponsoring at the 143rd Annual Meeting in Little Rock. The symposium promises to be a great day for learning about the uses of various social media platforms and providing reasons why you might consider using social media.

FITS

Students

There is still time to submit your poster for consideration in FITS 2013 Best Student Poster Award at the AFS Annual Meeting in Little Rock, Arkansas. The deadline for submission is August 9th 2013. For more information visit:
http://www.fishdata.org/content/students

Continuing Education

FITS is proud to sponsor the following Continuing Education Classes at the 2013 AFS Annual Meeting. Don't miss out— Sign Up Today! For more information visit:
http://afs2013.com/continuing-education/

- Beginning/Intermediate GIS for Fisheries Biologists
- Advanced GIS for Fisheries Biologists
- Mapping Aquatic Habitat of Inland Freshwater Systems Using Side-scan Sonar

Multi-Attribute Geovideo Mapping of Stream Habitats

Submitted by James Parham

Through the use of a combination of GPS, video, depth, and water chemistry sensors, it is now feasible to survey 15 miles of stream in a single day with data collected every meter. This multi-attribute data collection technique has the ability to change the thin blue line representing your stream on a GIS layer to a high resolution habitat layer. The range of data collected is highly useful for GIS mapping, modeling, and habitat identification applications.

As fisheries professionals, we use habitat use, availability, and suitability models as the basis for response to many management issues. Most of these models are based on habitat descriptions of short (several 100m) sections of stream or rivers. We distribute the field sites in various places within a stream or among streams and then extrapolate the conditions to represent a large portion of the stream system. It is typical to have direct field measurement on less than 5% (and in many cases < 1%) of the overall stream miles in a management area.

For example, in the 2006 Wadeable Streams Assessment, the EPA estimated that there are 671,051 wadeable stream miles in the lower 48 states. Their assessment used 1392 sites distributed across the country. If each site characterized habitat in a 1 mile section (a large overestimation) then their direct field measurement was approximately 0.2% of the total stream miles. The new multi-attribute geovideo mapping system greatly improves the ability of surveyors to accurately map habitat over long streaches of streams.

Dr. Paul Ayers, a biosystems engineering professor, at the University of Tennessee began the development of a georeferenced video mapping platform over 10 years ago. Over time and with the collaboration of colleagues and students, the technology, process, and validation of the techniques have advanced greatly. More recently, in conjunction with Trutta Consulting and Parham & Associates Environmental Consulting, this prototype technology is being made more standardized to directly support fisheries and habitat quality assessments.

By using georeferenced high-definition video of streambanks and river characteristics, the video can be assessed for many different

Geovideo Mapping of Stream Habitats

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characteristics. Integrating the video with other sensors allows a range of habitat conditions to be measured including:

- Right and left shoreline conditions, such as, bank height, bank angle, bank stability and erodibility, surface protection, riparian diversity, legacy trees, woody debris, bankfull level, docks, boat ramps, bridges, power line crossings, pipes, and point source and non-point source pollution locations.
- Stream conditions, such as, habitat type (pool/riffle/run), stream width, depth, velocity classes, substrate, embeddedness, channel rugosity, cover, location of barriers, sinuosity, and slope.

All of the data collected is georeferenced and can be classified in GIS software to support multiple management objectives. For example, this information can be used to:

- Greatly improve resolution of habitat suitability models and allow integration with models like PHABSIM and Mesohabsim.
- Support the EPA wadeable stream habitat assessment approach.
- Provide broad coverage for habitat quality in IBI type assessments.
- Delineate Threatened and Endangered species habitat and find locations of optimum habitat for reintroduction.
- Help identify and prioritize restoration areas to increase the cost effectiveness of restoration efforts.
- Apply Bank Erosion Susceptibility Index (BESI) scores to support the EPA Watershed Assessment of River Stability & Sediment Supply (WARSSS) methods.
- Compare habitat conditions in different riv-

ers as well as shows annual trends for the same river to see if river health is improving or declining.
- Assess habitat connectivity and proximity to look at habitat distribution over a range of seasons or flow conditions.
- Provide a permanent database of stream conditions that is reviewable in meetings to show actual conditions to all participants (as opposed to trying to get everyone in the field).
- Collect information in both cross-sectional and river thalweg profiles.

In addition to streamlining both the shoreline and instream habitat surveying methods, some upcoming plans include an effort to combine video techniques with side-scan sonar (like Kaeser and Litts methods) to create even more habitat classification abilities. Also, we are working with different water quality testing sensors to collect this information at high frequency during the stream surveys.

Overall, we feel this approach can rapidly and cost effectively transform the data poor stream lines into multi-attribute, high resolution habitat maps. This will allow managers to move from statistical assumptions about the "average condition" of a stream based on a few small samples to a census of conditions with highly accurate, site specific data available.

For more information, contact Dr. Jim Parham (FITS member and current President of the Tennessee AFS Chapter) at Jim.Parham@ParhamEnvironmental.com or Brett Connell at TruttaConsulting@gmail.com.

Meet the Editors

Nick Sievert

Nick is a Master's student working with Dr. Craig Paukert at the University of Missouri-Columbia. His work experience and current project utilizes large datasets compiled from research organizations including government agencies, universities, and non- profit groups. His current research focuses on identifying vulnerable species and using this information to evaluate Missouri's conservation networks. He has been a member of AFS since 2011.

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Rebecca Krogman

Rebecca is the Warmwater Specialist for the Lake and Reservoir Management & Research Program at California Department of Fish and Wildlife. She has been a member of AFS since 2007, and became involved in FITS in 2010.

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Call for Articles

If you did not get a chance to submit something to this newsletter, please send us your submission for the next publication. We are preparing the next newsletter for winter 2013. Newsletters will be published each spring/summer in preparation for summer events and meetings, and each fall/winter after the annual meeting of the Parent Society.

Submit your articles for the next newsletter by sending your article to afsfits@gmail.com. We welcome course announcements, meeting announcements, press releases, full articles (typically 1-3 pages), photos or digital images, and anything else that might catch our readers' interest. Thank you! Your participation in the Section is greatly appreciated by your fellow members (and editors)!

Learn more about FITS!

Visit our website to find section updates, past newsletters, software, and other useful technological resources! Also, check out our past winners of the FITS Student Travel Award!

Website: http://www.fishdata.org