FISHERIES INFORMATION AND TECHNOLOGY SECTION

Upcoming Events

Short Courses

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Fall 2010

this issue

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President's Byte

Good afternoon from warm and sunny Boone, Iowa. After another record-breaking summer of rainfall here in Iowa, we are having a fabulous fall. It's the 20th of October as I write, the farmers are busy harvesting the crops, the fall colors are striking, and we haven't yet had our first frost of the fall – but I'm sure that will happen soon!

There is some new news to share from AFS. First, AFS will be switching from in-house publishing of its journals to outsourcing that work, starting January of 2011. AFS will continue to maintain editorial control of the contents of these journals, but other aspects will be done externally. The expected results of this change include easier submission of journal articles, greater exposure of AFS journals in foreign markets, and better packaging of AFS journals with other journals to libraries. It is expected that this will result in an increase in library subscriptions, which should improve the bottom line for AFS.

The next piece of news is that AFS has weathered the "Great Recession" quite well as an organization. The value of AFS's investments has dipped, but that is a reflection of the stock market in general in the recent past. Gus Rassam, our executive director, has impeccable business acumen, and has AFS on firm financial footing. On a related note, the officers of AFS have undertaken a succession planning effort, in case Gus decides to retire at the end of his current contract. While retirement at that time is not a given, Gus will retire some time, and a plan is being prepared.

Lastly, I want you to know that efforts are underway to complete a comprehensive review of the AFS web site and the Electronic Services that AFS provides. I made a motion at the Governing Board meeting in Pittsburgh that up to \$25,000 be set aside to enter into a contract with an IT consulting firm to review those things, and create a plan, timeline, and budget for improvement. I feel strongly that IT

Best Student Poster Award given to Landi

Alicia Landi was awarded the AFS FITS Best Student Poster Award this year at the 2010 Annual AFS meeting in Pittsburgh, Pennsylvania.

Her poster was titled "Estimation of wave energy using fetch and wind data at horseshoe crab spawning beaches along the Connecticut coast."

Congratulations, Alicia!

President's Byte

Continued...

services are now truly "brick & mortar" infrastructure for the Society, and that the Society must make capital investments into IT infrastructure to provide the services that the society members expect. Andy Loftus, the long-time Secretary-Treasurer of AFS-FITS, is now also the Chair of the Electronic Services Advisory Board, and he is heading up this effort with me. We have the full support of the Governing Board and the Officers, but we also have the weight of expectations to perform. Some of you will likely be called upon to provide input or to conduct assessments as we enter into this comprehensive review. If you have interest in assisting, or if you would like to report issues you

have with the web site or electronic services, please send them to me at <u>Jeff.Kopaska@dnr.iowa.gov</u>.

Thank you, and have a great fall and winter. Page 12 of this newsletter includes some photos from my home town, Ames, Iowa, during the flooding this past summer. The flooding was caused when nearly every square inch of the 520 square mile watershed above Ames received 10 inches of rainfall in 52 hours. The water system was compromised, so we were without safe drinking water for a week. Interesting times!

— Jeff Kopaska

Midwest Fish and Wildlife Conference

The 71st Midwest Fish & Wildlife Conference scheduled for December 12 -15, 2010 in Minneapolis is shaping up to be a premier event. The conference will feature over 360 technical presentations and 75 posters communicating the latest in fish and wildlife research, policy, and management. This outstanding program is sure to offer something for everyone.

Registration for the conference is now open. You can register online with a credit card at <u>www.midwest2010.org</u>, or print a form at this web site and submit your registration by US Mail. In either case, you will take advantage of the very reasonable early registration fee of \$200 if you register by November 1. The conference program will be available on the web site in just a few days.

71st Midwest Fish and Wildlife Conference Minneapolis, Minnesota

FI TS

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Using Hydroacoustics for Fisheries Assessment

February 10-11, 2011 9 AM - 5 PM Seattle, WA

The hydroacoustic short course covers mobile and fixedlocation survey techniques, and subjects include basic hydroacoustic theory, deployment logistics, data collection and processing, as well as typical results. Splitbeam, single-beam, and multi-beam frequency techniques are discussed in detail.

Lunch is provided. For more information or to save a seat, email <u>sup-</u> port@HTIsonar.com.

Website: <u>http://</u> <u>www.htisonar.com/</u> <u>ha_short_course.htm</u>

fi shR

Using R for Fisheries Analysis-A Website Submitted by Derek H. Ogle

R is a statistical programming language that has gained favor with many statisticians in a variety of fields. It is free to use and the software is continually being extended, with add-on packages developed by users from around the world (there are currently ~2,000 packages in the official R repository with another unknown amount at other "forge" sites).

R is increasingly being used by students and professionals who study fish and fish communities. An unscientific survey found 27, 46, 55, and 109 fisheries-related publications that have cited R in the last four complete years. In addition, R is increasingly being taught in the fisheries curricula of colleges and universities and an R short course has been taught at the national AFS meeting in each of the last three years. Fisheries professionals, especially those interested in the relationship between technology and fisheries science and management, should take note of these trends.

Schnute *et al.* (ICES Journal of Marine Science 64 (2007):1077– 1084) said "(t)his remarkable open source project includes a large number of useful algorithms for statistical analysis and modeling, and the high level R language makes coding relatively easy." While "coding" is not "easy" for all of us, it is generally easier when there are relevant examples to follow.



I have developed the *fishR* website to maintain resources related to using R for fisheries analyses. A functioning prototype of fishR, available at www.ncfaculty.net/ fishR/, currently consists of four main sections: General Examples contains sixteen vignettes that describe various traditional fisheries science analyses; Book Examples will contain re-creations of analyses from several fisheries texts and currently contains eleven chapters worth of "boxed examples" found in the Analysis and Interpretation of Freshwater Fisheries Data book published by AFS; Journal Examples contains a list of all known fisheries related publications that have cited R including archived data sets and R scripts that allow users to reproduce the analyses of

FITS

Using Acoustic Tags to Track Fish

February 3-4, 2011 9 AM - 5 PM Seattle, WA

This short course addresses all aspects of tracking fish movement with acoustic tags, including threedimensional tracking with sub-meter resolution. The course includes hands -on-operation and a variety of applications are covered. Lunch is provided.

For more information or to save a seat, email <u>sup-</u> port@HTIsonar.com

Website: <u>http://</u> <u>www.htisonar.com/</u> <u>at_short_course.htm</u>

fi shR

Using R for Fisheries Analysis - A Website

published journal articles; and Packages which lists all R packages known to me that perform fisheries-related analyses.

It is my intent that fishR will be a resource that contains contributions from a variety of people -students, educators, professional researchers, and professional managers. You can participate in this community in the following ways: Comment about areas on the website or identify examples that are unclear, incorrect, or need more explanation; Suggest topics where you would like to see example analyses developed or additions to the website that would make it more useful to you; Contribute links to fisheries related packages or citations for fisheries-related journal articles that are not listed; Contribute examples of R scripts that contain worked examples of general fisheries topics or examples from books; Contribute reproducible analysis materials by submitting data and R scripts that would allow a user to reproduce the analyses used in a journal article.

If you are interested in using R for fisheries analyses then please visit the *fishR* website and use the resources provided there or become involved in its development.



Derek H. Ogle is a Professor of Mathematical Sciences and Natural Resources at Northland College in Ashland, WI.

Submitted by Andrew J. Loftus

The Fisheries Information and Technology Section (FITS) held its annual business meeting on September 13 in Pittsburgh, Pennsylvania. Recognizing the overlap in membership, the AFS Electronic Services Advisory Board (ESAB) joined in this meeting.

Governing Board Report

AFS 2nd Vice President (and former FITS president) Bill Fisher joined current FITS president Jeff Kopaska in providing a summary of the AFS Governing Board meeting. One of the most significant aspects of that meeting was approval of a motion sponsored by Kopaska to provide the ESAB with \$25,000 to review the AFS website. Since the revamping of the AFS website several years ago, increasing member interest in electronic services has placed greater demand on the ESAB and AFS staff to keep up to date in meeting those demands.

With impending changes to journals publishing, calls for making more of the Annual Meeting electronically available to those who cannot attend, and greater use of electronic delivery of Continuing Education classes, the timing is right to conduct a thorough and professional analysis of AFS capabilities. AFS Secretary/ Treasurer Andrew Loftus will lead the ESAB in this endeavor and closely coordinate with FITS membership in the process. Wayne Hubert, AFS president for 2010-11, encouraged the FITS membership to participate in this review as able in order to help put AFS on a path to fulfill membership needs for electronic services in the coming years.

Another highly significant decision of the Governing Board in the past year has been to move the journals publishing contract from Allen Press to Taylor and Francis. Taylor and Francis has a greater ability to market AFS journals

Photos (Credit: Gary Ash)



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particularly in international arenas and provided substantial financial incentives in cost savings and rebates to AFS for the term of the contract.

Finances and Software / Membership

In AFS/FITS business, Secretary/Treasurer Loftus reported that the section continued to be on solid financial footing (see attached financial report). Membership numbers have increased dramatically since we have begun offering free student memberships. We now have 493 members total. However, only 181 of those are regular memberships, compared to 205 last year.

The move to selling software through the AFS Bookstore (as approved by the membership at the 2008 meeting) has finally occurred, and AFS publishing director Aaron Lerner reported

Photos (Credit: Gary Ash)

that online sales have been good. AFS/FITS is offering three software packages through the website:

- Fi shBC
- Fishery Analysis and Modeling Simulator (the replacement for FAST)
- Slipke's Fishery Analysis Tools (S-FAT)

The Texas Parks & Wildlife DVD is still available directly from the FITS software librarian pending approval of software distribution agreement with that agency.

Software Review Coordinator Gary Ash reported that the only software package reviewed in the past year was Fishery Analysis and Modeling Simulator (FAMS). FAMS is the replacement for the successful FAST software that





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FITS has sold since 2001 under agreement with Auburn University. FAST has been discontinued since it is becoming obsolete (no longer fully compatible with newer operating systems) and support for the software is no longer available since Mike Maceina and Jeff Slipke (the developers) have both left Auburn. Ash also reported that Jack DeVenter, the developer of MicroFish, is still working on an Excel version of MicroFish 4.0, with an anticipated release in May 2011.

Newsletter and Website

In mid 2010 AFS/FITS president-elect Jodi Whittier agreed to coordinate the development of the FITS newsletter. However, Travis Neebling (Wyoming Game and Fish) and Rebecca M. Krogman (Mississippi State University) have stepped forward to assemble and edit the newsletters for the coming year. The need for member contributions to the newsletter was highlighted.

AFS/FITS webmaster Kevin Kayle is looking into alternative means to distribute FITS information, potentially through a Facebook page and other social media outlets. No major changes for the current website are planned except that we may move to a different web hosting servic in the near future for greater costs savings.

Continuing Education

At both the 2009 and 2010 AFS Annual Meetings, Jodi Whittier led the instruction of the GIS and Advanced GIS Continuing Education classes with assistance from Joe Gerkin in 2009, both of these classes were well attended. However, attendance in 2010 was fairly small. Mick Porter reported that from his experience in teaching these classes in the past, attendance tended to fluctuate from year to year, so this shouldn't be an overwhelming concern. Rebecca Krogman offered that it might help to advertise more with the Student Subsection that the classes may be appropriate for them.

Adam Kaesar and Thom Litts conducted the Sonar workshop in 2009 and 2010. Kopaska mentioned that AFS/ FITS may assist them with purchasing software to allow electronic distribution of this workshop in the future. Kopaska also reported that AFS/FITS has agreed to a \$500 sponsorship of a continuing education course "Getting the Most From Excel: Tips, Tools, & Techniques" at the Midwest Fish & Wildlife Conference.

Student Poster Award

Kopaska noted that the 2009 winner of the AFS/FITS Best Student Poster Award portraying the application of computer-electronic technology in fisheries management and research went to Justin Spinneli for his poster *Spatial and Temporal Fish Entrainment through Hauser Dam, Montana.*

Interest in this award continued to be low. Thoughts for increasing interest and awareness of the award include: putting a check box for student presenters to signify their interest at the time they submit their posters, making sure that it is publicized in *Fisheries*, and working directly with students to announce and publicize the

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award. After some discussion, a motion was approved to increase the award to \$250 and try it for another year. Loftus mentioned that we need to continually evaluate whether the award is serving its intended purpose – to increase interest among students for preparing posters of this nature. Jodi Whittier will remain the lead for his effort in the coming year.

New Projects

Norman Mercado-Silva provided an update on the efforts to follow up to the publication of the Standard Sampling book last year. Working with Scott Bonar, he is developing a website with financial support from USGS and others to serve standard sampling databases that were collected as part of the publication of the book. The site will offer users the opportunity to compare their databases with those data already in the database by state, ecoregion, waterbody, type of gear used to collect data and other factors and contribute their own data. He requested AFS/FITS financial support for developing the website as well as 1-2 volunteers to review the website.

John Jackson asked whether users would be charged for the website, to which Mercado-Silva replied no. Loftus asked whether there was a requirement that users contribute data before accessing other data and Norman Mercado-Silva replied that there was not.

Fred Janssen expressed concern that this project is similar design as other data collection efforts and might be redundant with those. Were there plan to integrate with others? How long will it be around? He suggested that since the standard sampling publication was an AFS supported project, it might be a service that can

Students

Does your research use technology in a unique or novel way?

Want to go to the national meeting? Want to see what FITS is all about?

Enter the AFS FITS Best Student Poster Contest!

Send your title and abstract to Jeff. Kopaska@dnr.iowa.gov Entry is that easy!

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be provided through the AFS website or evaluated in the upcoming web assessment.

In terms of the budget, Norman Mercado-Silva said that that they were trying to raise anywhere between \$80,000 and \$100,000 and thus far they have approximately \$35,000. The Fishery Management Section donated \$5,000 yesterday on a very close vote. Whittier questioned whether they were on track to get more than the money they need. Norman Mercado-Silva responded that they are still trying to tap into funds but think they might get what they need. In response to some questions, Loftus responded that while the FITS budget could afford a donation, the Section has never provided more than \$1,000 for any such requests in the past.

Gary Ash and Kevin Kayle volunteered to look at their website and advise them. After a discussion about whether to provide funding, it was decided to forgo it at this time over concerns regarding lack of an adequate budget, uncertainty over what would be gained from the funds, and concerns about setting a precedent for funding requests that are brought up at the meeting with no review prior to the meeting. Kopaska and Whittier agreed to look into a policy for entertaining funding requests – the Fisheries Management Section and Education Section have both implemented procedures for submission of funding requests in advance.

Howard Townsend, with NOAA Fisheries mentioned an interest by his agency in the in Chesapeake Bay region to bring data from different jurisdictions together via a common system. He asked the membership for suggestions about who else was doing something like this. Loftus noted that he should talk with Andrea Ostroff at USGS and volunteered to set up such a meeting.

	March 2002	June 2003	May 2004	Sept 2005	June 2006	Aug 2007	May 2009	S	Sept 201 R	0 Total
U.S. Members	246	251	219	229	198	207	183	283	159	442
Interna- tional Members	38	34	38	29	22	27	22	29	22	51
TOTAL	284	285	257	258	220	234	205	312	181	493
S=Student/young professional membership R=Regular membership										

Membershi p

Statement of Income and Expenses

January 1, 2009 - December 31, 2009

	1/1/08- 12/31/08	1/1/09- 12/31/09	Difference 2009-2008	2009 Amount At- tributable to Grants
Balance Forward	\$22,545	\$30,325		
INCOME				
Continuing Education	\$1,345		(\$1,345)	
Contract & Grant Income	\$81,845	\$103,345	\$21,500	\$103,345
Dues Payment	\$1,730	\$583	(\$1,147)	
Interest Income	\$237	\$73	(\$164)	
Other Inc		\$206	\$206	
Software Sales	\$2,306	\$1,700	(\$606)	
TOTAL INCOME	\$87,463	\$105,908	\$18,444	\$103,345
EXPENSES				
Award		\$125	\$125	
Bank Charge		\$33	\$33	
Conference or Meeting expense	\$380		(\$380)	
Continued Education	\$600	\$955	\$355	
Contract & Grant Expense	• • • •	• • • • •	• • • • •	
Grants	\$65,035	\$70,303	\$5,268	\$70,303
Other	+,	\$ 96	\$96	+
Services	\$ 6,926	\$24,010	\$17,084	\$24,010
TOTAL Contract & Grant Exp.	\$71,961	\$94,409	\$22,448	\$94,313
Copying	. ,	\$29	\$29	\$25
Donation	\$1,000		(\$1,000)	
Past Pres Plaque	\$25		(\$25)	
Postage	\$130	\$139	\$9	
Software Comm-Auburn	\$1,365	\$1,495	\$130	
Software Commission-other	\$99	\$535	\$436	
Supplies	\$68	\$67	(\$1)	
Travel	\$3,620	\$3,621		\$2,131
Web services	\$434	\$323	(\$111)	
TOTAL EXPENSES	\$79,683	\$101,731	\$22,048	\$96,469
OVERALL TOTAL	\$7,781	\$4,177	(\$3,604)	\$6,876
ENDING BALANCE	\$30,325	\$34,502	\$4,177	

Flooding in Ames, Iowa



The group of people in the upper right are filling sand bags, and that is the location I was volunteering and filling sand bags on August 11, 2010.

This photo, from inside of Hilton Coliseum, shows the basketball court floating on top of about 14 feet of water inside the facility. The volleyball nets are still attached to the floating floor.

> The Iowa State University football stadium is in the foreground, with the basketball stadium behind. Sand barriers prevented the flood waters from flowing into and filling the football field.





Report to the Governing Board

TO: Don Jackson, President

FROM: Jeff Kopaska, Fisheries Information and Technology Section

DATE: August 13, 2010

I. Motion Report

none

II. Activity Report (5 pages max)

(A) Summary of Outcomes and Accomplishments

Goal 1: Global Fisheries Leadership

- 1. Support AFS in its response to Gulf Oil Spill
 - a. Collaborators: Jeff Kopaska, Bernard Megrey
 - b. Tasks:
 - i. Provide information and technical guidance regarding oil spill information

1. Accomplished (ongoing)

ii. Ensure that the AFS website provides accurate, timely, and easily accessible information regarding the oil spill and AFS activities/responses

1. Accomplished (ongoing)

- 2. Continue support of the National Fish Habitat Action Plan
 - a. Collaborators: Doug Beard, Stu Shipman
 - b. Tasks:
 - i. Maintain communication with the NFHAP Science and Data Committee

1. Accomplished (ongoing)

ii. Form 4 data sharing work groups identified in post-survey of National Fisheries Data Summit: Data Standards, Biology, Information Technology, Policy

1. Partially Accomplished

iii. Link NFHAP Science and Data Committee with Data Sharing Work Groups

1. Not accomplished

iv. Invite NHFAP Assessment Status staff to present at the Fish Distributions of North America symposium at the 2009 AFS Annual Meeting

1. Accomplished

- 3. Continue collaborative relationship with USGS-NBII, OFWIM and other organizations
 - a. Collaborators: Jeff Waldon, Andrea Ostroff, Robin Carlson
 - b. Task:
 - i. Support OFWIM annual meeting through newsletter and website announcement

1. Accomplished (2009)

- ii. Administer ongoing projects
 - 1. New project initiated "Fisheries Information Systems Convergence and Fish Data Compilation for NFHAP Assessment" with USGS-NBII (2008)
- iii. Initiate new partnerships with OFWIM
- 4. Initiate a web-based distribution of selected portions of AFS meetings via a video-conference, webinar, or other means.
 - a. Collaborators: 2010 Annual Meeting Program Committee
 - b. Task:
 - i. Webcasting of introduced species symposium
 - 1. Accomplished
 - i. Webcasting of selected portions of Catfish 2010

1. Not Accomplished

ii. Webcasting of selected portions of the 2010 Annual Meeting

Report to the Governing Board

1. In progress

Goal 2: Education/Continuing Education

- 1. Support new and innovative continuing education workshops
 - a. Collaborators: Thom Litts, Angela Grier, Rebecca Papke
 - b. Task: Support workshop "Mapping Aquatic Habitat of Inland Freshwater Systems using Side-Scan Sonar" by Adam Kaeser and Thom Litts.

1. Accomplished (2010)

c. Task: Support Excel modeling workshop at North Central Division meeting

1. In progress

- 2. Initiate a web-based distribution of selected portions of AFS meetings via a video-conference, webinar, or other means.
 - a. Collaborators: 2010 Annual Meeting Program Committee
 - b. Task: webcasting of selected continuing education workshops
 - 1. In progress

Goal 3: Value of Membership

- 1. Maintain and update FITS website
 - a. Collaborator: Kevin Kayle
 - b. Task: Redesign front page to make it more user friendly.
 - 1. Accomplished (2009)

2. Mirror Web 2.0 site established

- 2. Continue biannual electronic newsletter
 - a. Collaborator: Angela Grier
 - b. Task:
 - i. Contribute President's message to and solicit other items for CUS Newsletter.

1. Not accomplished

ii. Replace newsletter editor

1. Accomplished

- 3. Scope out new IT resources useful for fisheries professionals
 - a. Collaborators: Gary Ash, Al Stevens, Rick Lorenzen
 - b. Tasks: Identify
 - i. Core source code for common applications
 - 1. In progress
 - ii. Information resources for making decisions regarding handheld field data collection devices.

1. In progress

- 4. Initiate a web-based distribution of selected portions of AFS meetings via a video-conference, webinar, or other means.
 - a. Collaborators: 2010 Annual Meeting Program Committee
 - b. Task:
 - i. Webcasting of introduced species symposium
 - 1. Accomplished
 - ii. Eebcasting of selected portions of Catfish 2010

1. Not accomplished

- i. Webcasting of selected portions of the 2010 Annual Meeting
 - 1. In progress
- 5. Recruit new members
 - a. Collaborator: AFS Bethesda
 - b. Tasks:
 - i. Confirm free student and Data Summit members (request list from AFS)

Report to the Governing Board

- ii. Communicate with student members
- iii. Better engage student members by soliciting their help with FITS business1. Not accomplished
- 6. Promote student poster award
 - a. Collaborators: AFS Bethesda, 2010 Annual Meeting Program Committee
 - b. Tasks:
 - i. Clearly describe purpose of award and qualities of research/poster
 - ii. Additional technology poster award being offered in conjunction with ADMB
 - iii. Solicit potential award recipients prior to meeting

1. Accomplished

- iv. Promote award after presentation
 - 1. Accomplished
- 7. Support Electronic Services Advisory Board
 - a. Collaborator: Joel Carlin
 - b. Task: Serve on Committee and support their work plan, as required
 - 1. Accomplished
- (B) Recommendations or Suggestions for Future Consideration

AFS-FITS would like to continue efforts regarding live, web-based distribution of the selected portions of AFS meetings via a video-conference, webinar, or other means.

Message from the Editors

As you may have realized, our previous editor, Jodi Whittier, has relinquished her newsletter editing duties. Thank you, Jodi, for your dedication and willingness to serve the Section!

Please allow us to introduce ourselves:

Travis Neebling

Travis is a fisheries biologist with the Wyoming Game and Fish Department. He conducts research and annual monitoring, primarily on large reservoirs, throughout the state. He has been an active member of AFS since 2004.

Rebecca Krogman

Rebecca is a Master's student working with Dr. Steve Miranda at Mississippi State University. Her project focuses on the relationship between habitat and fish communities in reservoir

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 May 2011, an earlier date that previous newsletters. We have changed the publication time to provide you with more timely and useful information, such as course announcements, meeting minutes, award opportunities, and much more.

Newsletters will be published each May in preparation for summer events and meetings, and each September/October immediately after the national meeting of the Parent Society.

Submit your articles for the next newsletter by sending us an email at afsfits@gmail.com.

Thank you! Your participation in the Section is greatly appreciated by your fellow members (and editors)!

systems, She has been a member of AFS since 2007, and became involved in FITS this year. She is also serving AFS as a student representative on the Electronic Services Advisory Board for this section, as well as the Continuing Education initiative to create a database of AFS-approved courses.