



American Fisheries Society

# EDUCATION SECTION

VOLUME 32(1)

JANUARY 2011

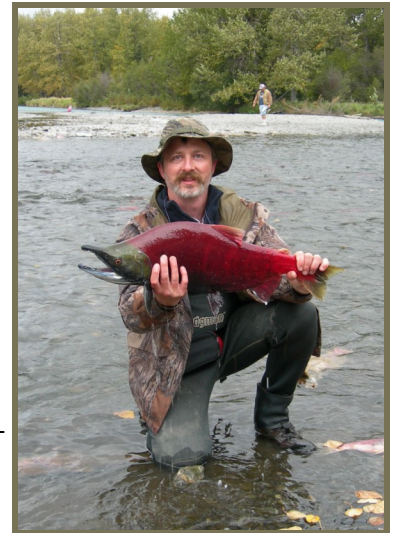
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## President's Line

*"A good education should leave much to be desired"* - **Alan Gregg**

A friend's email informed me that today (01-11-11) is a binary day. I couldn't believe I missed this important fact until I realized that there are only 10 types of people in the world --- those who know and those who don't. I trust everyone is embracing the new year and looking forward to new projects and activities. We have a lot to be proud of over the last year, as the Section made important contributions to book projects, student activities, travel awards, and the mission of the American Fisheries Society. A special thanks to Wayne Hubert and Mike Quist for their timely (and economical) delivery of the 3<sup>rd</sup> edition of *Inland Fisheries Management in North America*. Last fall, our "Special Essay Series" in *Fisheries* kicked off with articles by Don Gabelhouse Jr. (Needs and proficiencies of fisheries hires by state agencies) and Andrew Seitz/Trent Sutton (Distance learning in today's classroom) – with more to follow in 2011. The new year also brings new opportunities for service in the Section, as committee chairs and officer positions become available. As Past-President Tom Kwak pointed out in Pittsburgh – it is important that our EXCOM be represented by the diversity of our membership. Toward this end, I encourage everyone to consider how you might serve the Section and think about running for an office or committee chair. Several members have volunteered their time and service as new chairs or representatives for 2011 and deserve special thanks: Steve Cooke and Lisa Kerr were elected as new Division Representatives, serving the North Central and Northeastern Divisions; Jill Leonard and Tracy Galarowicz are the new Co-Chairs for the Best Student Paper and Poster symposia; Dan Daugherty serves as Chair of the Skinner Memorial Award committee; and Dan Dauwalter and Justin VanDeHey have joined the New Initiatives committee. As we look ahead to 2011, a number of important initiatives and activities are being planned. The Young Professional Award, a new initiative proposed by the Membership Committee (see details below), provides a great opportunity to support non-student travel needs to AFS meetings. The New Initiatives committee is working on a plan to better serve continuing education needs of AFS units by working to create a link among the Education Section, the Continuing Education Committee and the AFS Certification committee. And later



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Visit the Education Section of the American Fisheries Society online at: [www.fisheries.org/units/education/](http://www.fisheries.org/units/education/)

## President's Line (cont)

his month, the Student Subsection, with support from the Section, will be hosting the 4<sup>th</sup> annual student colloquium at South Dakota State University.

Like most, I find that this time of year is a good time to catch up on writing and helping students with their analyses. I suspect that with unbelievable amounts of snow (2-4 inches - ☉), even our colleagues to the South are stuck behind a desk this month. So here is some writing advice from a recent paper by Kendall (2010) entitled "Publish like a Pro" :

- "You are only as good as your last paper — previous success does not guarantee future acceptance.
- You've got to hook the editor with the abstract.
- Don't delete those files. Keep every version. You never know what aspect you can use for some other piece of writing.
- Writing is an amazingly long learning curve. Many authors say that they're still getting better as a writer after several decades.
- The most significant work is improved by subtraction. Keeping the clutter away allows a central message to be communicated with a broader impact.
- Write every day if possible.
- Once you've written what you wanted to convey, end it there."

Finally, my ignorance got the best of me, so I had to find out more about binary dates --- As it turns out, the next real binary date, like November 11, 2011 (11-11-11), won't occur for another 1,000 years. So, happy and productive new year to all. As always, if you have any question or ideas, please drop me an email ([steven.chipps@sdstate.edu](mailto:steven.chipps@sdstate.edu)) or call (605.688.5467).

Powell, K. 2010. Publish like a Pro. Nature 467:873-875.

## Best Student Paper/Poster Award

Students – just a reminder that the registration deadline for Best Student Paper and Poster at the Seattle, Washington Annual Meeting is February 11, 2011. This submission process is the same as the contributed abstract submission, with some extra requirements.

To be considered for an award, applicants must:

- (1) submit an extended abstract to the committee and
- (2) have their advisor indicate on the website that the study is at the stage appropriate for award consideration.

For more information, visit the AFS web page at <http://afs.confex.com/afs/2011/student/cfp.cgi>



## Dumbing down fish biology texts: a smart move?

Peter Moyle

Once a year, I teach a basic fish biology course to 65-85 bright undergraduates. The basic structure of the course is top down: I lecture, while the students listen and read a text book, write a few papers, and take exams to test their knowledge. I learned long ago that the standard lecture is a killer for learning so I try to break each one up with changes of pace, e.g., some Power Point slides, then a chalk talk, then a pop quiz or discussion, then back again to Power Point. The best lectures have personalized stories imbedded in them (if student attention is the marker).

But I still require assigned linear readings from a big thick ichthyology textbook, that, not coincidentally, I wrote. Academics like me write textbooks for three audiences, in order of importance: (1) themselves, (2) their colleagues who might adopt it for a class, and (3) students. A successful textbook is one that gets adopted by many faculty and tends to be chosen on basis of completeness, how well it covers what the faculty member thinks is important, and whether or not the instructor's papers are cited. The assumption is that students will mine the text for information needed for their class and then keep the text as a reference for later use, justifying an encyclopedic approach. My impression is that today's students find trying to ferret information out of a text to be difficult and boring. Increasingly, they get rid of the book as soon as the class is finished. So making the text (assuming one is even needed) more useful and stimulating for learning is important.

In 1993, I published a book called *Fish: an enthusiast's guide* (UC Press), which is still in print. It was meant to be a popular version of my ichthyology text, aiming at high school or community college students, as well as amateur naturalists. It is written with a light touch, using personal stories and good drawings. But it also includes a lot of basic information. In fact, if the average student in my fish biology class came out of the class knowing well the core information in the enthusiast's guide, I would consider my teaching a huge success. I am not convinced they come out of my class with that much background today.

I am now thinking of using this book (or perhaps an update of it) in my fish biology class and take advantage of the student's facility with electronic devices. When a species of fish is discussed in the book, a student can flash to Google Images for a quick look at color photos or even videos. Do students need a better explanation of some concept or fish group than is in the text? They can go to Wikipedia or other increasingly reliable websites. As instructor, do you find you don't like the account on Wikipedia for your favorite subject? Revise it. Do you want your students to learn more about some favorite subject? Provide summaries on a class website, with links to a real paper. Or have the students create the summaries. With an easy-to-read, enjoyable text guiding interactive learning I assume much greater knowledge (the kind that sticks) will result. True?

So my question for students and faculty who are reading this is: is using a more elementary text book this way dumbing down the material or is it actually improving learning? Keep in mind you are probably biased because you loved endless lectures and text accounts of fish biology. But is that true of the student in the back (or even middle) row, who will not wind up as an aquatic biologist? What other alternatives are there? I would like your opinion, perhaps expressed as a dialogue in this newsletter.

**Editors Note:** Responses to Dr. Moyle's contribution will be published in the next Education Section Newsletter (i.e., July 2011). Hopefully, a diversity of opinions (e.g., graduate students, young and old educators) will offer insight into the future of fisheries texts. Your responses are encouraged and can be sent to the Newsletter editors Joe Gerken ([gerkenje@ksu.edu](mailto:gerkenje@ksu.edu)) or Jesse Fischer ([fischer@iastate.edu](mailto:fischer@iastate.edu)).

## Simulations to Aid Understanding Mark-Recapture Assumptions

Derek H. Ogle

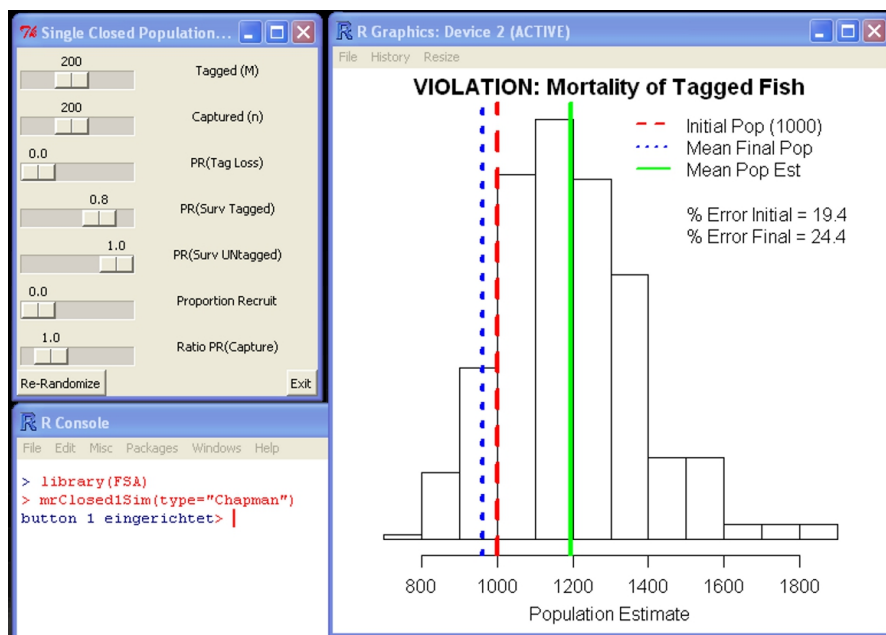
All fisheries students learn the Petersen mark-recapture method for estimating fish abundance at some point in their undergraduate curriculum. Basic development and use of the calculational formula is fairly straightforward to teach and understand. However, understanding the effect of violating one or more of the assumptions on which the formula rests is not as easy to understand. I used the R program to develop an interactive simulation tool to aid a student's exploration of the basic mark-recapture assumptions. I briefly introduce this tool below with the understanding that the Petersen method, and its assumptions, are familiar to you.

The `mrClosedSim()` simulator produces 500 independent samples from a population of 1000 fish given user settings for the number of captured, marked, and returned fish from the first sample and the number of captured fish in the second sample. The population estimates (PE) using the Petersen method (with the Chapman modification as shown here) from the 500 samples are then plotted (right side of figure below) as a histogram with a vertical green line representing the mean PE from the 500 samples, a vertical dashed red line representing the known initial population size (prior to the first sample), and a vertical dashed blue line representing the mean final population size (prior to the second sample). The percentage errors of the mean PE from the known initial or mean final population size are also displayed on the figure. From this figure, the student can immediately see the sampling distribution of the PEs (i.e., the histogram) and the potential bias (or lack thereof) of the PE for estimating the initial or final population size (i.e., comparing the vertical green line to the vertical red or blue lines).

The student can model assumption violations by moving slider bars (left side of figure) to various values. For example, the student can ...

Move the **PR(Tag Loss)** slider (i.e., "probability of tag loss") to a value greater than 0 to simulate tag loss.

Move the **PR(Surv Tagged)** slider (i.e., "probability of survival for tagged fish") to a value less than 1 to simulate mortality (or immigration) of tagged fish.



Move both the `PR(Surv Tagged)` and `PR(Surv Untagged)` sliders (i.e., “probability of survival for untagged fish”) to the same value less than 1 to simulate mortality of all fish.

Move the `Proportion Recruit` slider (i.e., “number of recruits as a proportion of population size”) to a value greater than 0 to simulate recruitment or emigration.

Move the `Ratio PR(Capture)` slider (i.e., “the ratio of the probability of capture of tagged to untagged fish”) to a value greater than 1 to simulate an increased catchability for tagged fish (i.e., “trap happy”) or to a value less than 1 to simulate a decreased catchability of tagged fish (i.e., “trap shy”).

The figure shows, for example, a student modeling an 80% survival rate of tagged fish between the two samples. The effect of the assumption violations on the PEs is shown immediately as the histogram, corresponding vertical lines, and percent error statistics are updated as the slider bars are moved. For example, this student would see that a 20% mortality rate for tagged fish would, if undetected by the biologist, lead to an average 19.4% over-estimate of the initial population size and a 24.4% over-estimate of the final population size.

In the classroom, I briefly describe (i.e., lecture) the mark-recapture assumptions, describe the simulator graphic, describe each of the slider bars, illustrate how to interpret an example graphic when one of the assumptions has been violated, ask the students to then independently determine the impact of various assumption violations on the estimates of the initial and final population sizes by manipulating the sliders, and, then, reconvene the class to discuss the results. While discussing the results I attempt to engage the students in thinking critically about why certain assumption violations lead to the observed results. For example, I will ask “*why* does mortality of tagged fish lead to an over-estimate of the population size?”

I have not formally assessed the impact of this tool on student learning largely because I have modified the simulator after each use. My belief is that this tool has helped each student to, at least, realize the importance of assumptions on PEs made with the Petersen method. Discussions with more thoughtful students have been deeper and have ranged from how we can (or cannot) detect and correct for assumption violations to looking at the sampling distributions relative to using different statistical distributions to compute PE confidence intervals.

The `mrClosed1Sim()` simulator function is contained in the FSA package for the R program. The R program is available at [www.r-project.org](http://www.r-project.org) (follow the “download” link). The FSA package is available at [www.rforge.net/FSA/](http://www.rforge.net/FSA/) (follow the instructions under the “installation” link). The simulator program requires the tcltk language to be installed which can be problematic (but can be overcome) in the Macintosh environment.

Derek H. Ogle is a professor of Mathematical Sciences and Natural Resources at Northland College in Ashland, WI. Please feel free to contact him ([dogle@northland.edu](mailto:dogle@northland.edu)) with any questions, comments, or suggestions for improvements to the simulator.



# John E. Skinner Memorial Award

## 2011 CALL FOR NOMINATIONS

After FIVE years of exemplary service on the committee, Joe Hightower has passed on the duties of committee chair to Dan Daugherty. Dan is a senior fisheries research biologist with the Texas Parks and Wildlife Department at the Heart of the Hills Fisheries Science Center, and has served as a Skinner Award committee member since 2009. The committee is comprised of six fisheries professionals and a student representative; duties of the committee primarily consist of reviewing applications and selecting successful applicants for the annual John E. Skinner Memorial Fund Award, which provides monetary travel awards to deserving graduate students or exceptional undergraduate students to attend the AFS annual meeting. Committee members typically serve a 3-year term, and a student representative is appointed annually. Current members of the committee have agreed to continue serving for the 2011 award year, and a student representative has been secured. However, the committee welcomes a volunteer to fill the vacancy left by Dr. Hightower.

For students interested in applying for the 2011 Skinner Memorial Award, applications forms for students and advisors (separate forms) will be available beginning in late January (<http://www.fisheries.org/afs/awards.html>). Completed applications (both forms) must be received no later than 09 May 2011. For more information about the Skinner Award, or for professionals interested in serving on the committee, please contact:

Dr. Dan J. Daugherty  
Texas Parks and Wildlife Department  
Heart of the Hills Fisheries Science Center  
5103 Junction Hwy.  
Mountain Home, Texas 78058  
Phone: (830) 866-3356 x 211  
FAX: (830) 866-3549  
Email: [Dan.Daugherty@tpwd.state.tx.us](mailto:Dan.Daugherty@tpwd.state.tx.us)

## NEW Student Subsection - Student Reviewer Database!

The Student Subsection has recently revamped the Student Reviewer Database. The online form was sent to AFS student members in December, 2010 and received 84 participants to date. The new database provides students the ability to enter their contact and reviewer expertise information online and will be annually sent to students to keep an updated list for journal editors. Additionally, the new database will NOT publically display reviewer information on the Subsection website. As such, journal editors are encouraged to contact the Student Subsection webmaster ([afsstudent@gmail.com](mailto:afsstudent@gmail.com)) to obtain access to the database.



## Excellence in Fisheries Education Award 2011 CALL FOR NOMINATIONS

The American Fisheries Society (AFS) Excellence in Fisheries Education Award was established in 1988. The award is administered by the Education Section and is presented to an individual to recognize excellence in organized teaching and advising in some aspect of fisheries education. Nominees may be involved in extension or continuing education, as well as traditional college and university instruction. Nominees must be AFS members, have been actively engaged in fisheries education within the last five years, and have had at least 10 years of professional employment experience in fisheries education. Two or more people may act as nominators, but at least one nominator must be an AFS member. The nominator(s) is responsible for compiling supporting material and submitting the application. The suggested format for applications can be found on the Education Section web site. Application materials should be sent to Jason Vokoun ([jason.vokoun@uconn.edu](mailto:jason.vokoun@uconn.edu)) in digital form.

Nomination deadline is May 15, 2011. Additional information can be obtained from:

Jason Vokoun  
Chair, Excellence in Fisheries Education Committee  
Dept. of Natural Resources and the Environment  
University of Connecticut  
Phone: (860) 486-0141  
Email: [jason.vokoun@uconn.edu](mailto:jason.vokoun@uconn.edu)



The 2010 recipient of the Excellence in Fisheries Education Award (above) was Dr. Thomas P. Quinn of the University of Washington.

## Student Writing Contest

The Student Writing Contest recognizes students for excellence in the communication of fisheries research to the general public. Undergraduate and graduate students are asked to submit a 500- to 700-word article explaining their own research or a research project in their lab or school. The article must be written in language understandable to the general public (i.e., journalistic style). The winning article will be published in *Fisheries*. Students may write about research that has been completed, is in progress, or is in the planning stages. The papers will be judged according to their quality and their ability to turn a scientific research topic into a paper for the general public and will be scored based upon a grading rubric. (check the AFS web site on the main awards page for the grading rubric)

For examples of past winning papers, see *Fisheries* 32 (12):608&609 and *Fisheries* 34(1):39

Submission deadline: **April 15, 2011**

Contact: Walt Duffy  
CA Cooperative Research Unit  
Humboldt State University  
Arcata, CA 95521-8299  
Phone: (707) 826-5644  
Fax: (707) 826-3269  
Email: [wgd7001@humboldt.edu](mailto:wgd7001@humboldt.edu)

# Highlighting Student Divisions

## Western Division

The 2010 Western Division AFS Student Colloquium took place in Moscow, Idaho at the beginning of October and was a success. Thirty-six students from Montana State University, University of Montana, Colorado State University, University of Idaho, and Idaho State University participated. The Palouse Unit at the University of Idaho greeted students at a Welcome Social on Thursday, October 14<sup>th</sup>. Over food and drinks, students met and networked with each other as well as 10 professionals in the fisheries discipline. Students went on a jet boat trip up Hell's Canyon the next day. This was a beautiful scenic tour of the deepest canyon in the United States that everyone enjoyed. On Saturday, October 16<sup>th</sup>, 11 students presented their research, including two undergraduates, Will Stacy and Evan Faulk. Prizes were awarded to the top three presenters; congratulations to Scott Collins (1<sup>st</sup> place), Amy Long (2<sup>nd</sup> place), and Mariah Mayfield (3<sup>rd</sup> place). Students then went on a tour of the University of Idaho's wet lab facilities, which includes a burbot rearing facility. After the tour, students were treated to a BBQ at a local park where issues concerning student subunits were discussed. Additionally, it was decided that University of Montana will host the 2011 WDAFS student colloquium. The closing social was held on Saturday night at EcoAnalysts, Inc. EcoAnalysts graciously hosted the social and displayed their work on taxonomic identification of macroinvertebrate samples, biological assessments, and consulting services. The Palouse Unit of the American Fisheries Society would like to thank Western Division AFS, Idaho Chapter AFS, the Education Section of AFS, and the USGS Cooperative Research Program for their financial support.

Amy Long presenting her research to the students participating in the colloquium (below).

Students participating in the Hell's Canyon jet boat tour as part of the Student Colloquium (right).



Students and professionals networking at the Welcome Social (right).





## Highlighting Student Divisions (cont)

### Canada

On Saturday January 8<sup>th</sup> 2011 at the Canadian Conference for Fisheries Research (CCFFR) held in Toronto, Ontario, CARS hosted a student colloquium. Panel members were Steven Cooke, a professor from Carleton University; Martin Koops, a scientist with Fisheries and Oceans Canada; Scott Gibson, a species-at-risk biologist with the Ontario Ministry of Natural Resources and a former consultant; Karen Murchie, a recent PhD graduate and a post-doc; and John Lark, the president of Coherent Advice and a long time fixture at CCFFR. Panel members were asked to talk about their backgrounds, their careers, and mainly focus on the paths they took to their current positions. They also provided very valuable “sage” advice to over 60 students (17 universities represented!). The students then had an opportunity to ask questions and interact with the panel members.

Some of the highlights were: 1) Finding out that it is ok to have a bad day, week, or even year- just stick with it, move to plan “b” if you have to; 2) Involvement with AFS or other professional societies is a must for success; 3) Having a lunch buffet in the room really helps bring in the crowd; 4) Be careful with your cover letter- make sure you talk about and provide examples for all of the job requirements; 5) Don’t be afraid to approach people at a conference, no one bites that hard; 6) The Rotary Club and the Society for Fisheries Society of the British Isles has funding opportunities for travel and research.

Many thanks to CARS executive committee for helping to plan the event, Rob McLaughlin and Nick Collins for logistical planning of the conference and the colloquium, Mike Donaldson for helping with the colloquium and taking pictures, and to all of the panel members. Also, many thanks to the other fisheries professionals that participated in the colloquium and helped to address many of the questions.



*Caleb Hasler is the Canadian Aquatic Resources Section (CARS) Communication Officer and a Ph.D. candidate at Carlton University. He can be contacted at [chasler@connect.carleton.ca](mailto:chasler@connect.carleton.ca).*

*John Lark speaking to students at the Student Colloquium held in Toronto, Ontario by the Canadian Conference for Fisheries Research.*

## Highlighting Student Divisions (cont)

### North Central Division

The 2011 Midwest Student Fisheries Colloquium was hosted by the South Dakota State University (SDSU) student sub-unit of the American Fisheries Society (AFS) January 21 and 22, 2011 in Brookings, South Dakota. The purpose of the Midwest Student Fisheries Colloquium is to provide undergraduate and graduate students from a diverse backgrounds an opportunity to interact and share ideas, present research, and develop professional networks. Previously, this annual event has been hosted by the University of Nebraska – Lincoln (2008), Iowa State University (2009), and Kansas State University (2010). Sub-unit members worked extremely hard over the past few months planning and coordinating for the meeting, and their efforts paid off with an extremely valuable event for student participants.

Following tradition of previous colloquia, Friday evening (Jan. 21) consisted of a dinner provided by members of the SDSU student sub-unit. During the meal, SDSU's Dr. David Willis gave an excellent welcoming address that provided an overview of the diversity of fisheries that the state of South Dakota boasts. In addition, American Fisheries Society Education Section president Dr. Steve Chipps (SD Cooperative Fish and Wildlife Research Unit) and Great Plains Natural Science Society representative Josh White spoke to attendees about the numerous benefits of participation with their respective organizations. Following the presentations, the student social was held to allow students to network and share ideas.

On Saturday a student symposium was held to provide graduate and undergraduate students an opportunity to present their research in a relaxed and peer-friendly environment. The symposium featured 13 oral and 5 poster presentations covering a diversity of topics from the deserts of Nevada to the Great Lakes and imperiled species to commercial fisheries. Attendees were asked to evaluate these presentations which provided useful feedback, promoted professional development, and stimulated idea sharing among colloquium participants. Colloquium attendees expressed many positive attitudes about the atmosphere and benefits of the event, and we hope that next year's Midwest Student Colloquium will continue to build on these successes.

Funding for this year's colloquium was generously provided by the Education Section of AFS, the Dakota Chapter of AFS, and the Great Plains Natural Science Society. Thanks to these donors, the SDSU sub-unit was able to provide free lodging and meals to all colloquium participants while keeping the registration costs of the meeting very modest (\$ 15). We would like to extend our deepest gratitude to these donors.

Respectfully submitted by the colloquium coordinator, Luke Schultz ([luke.schultz@sdstate.edu](mailto:luke.schultz@sdstate.edu)).

Symposium moderator Luke Schultz introduces speaker Jeremy Hammen during the afternoon session of the Colloquium. (right)



Students view posters and discuss research views during one of the session breaks at the 2011 Midwest Student Fisheries Colloquium. (above)

Participants from the 2011 Midwest Student Fisheries Colloquium (below)



## Fall Fish Camp Journal

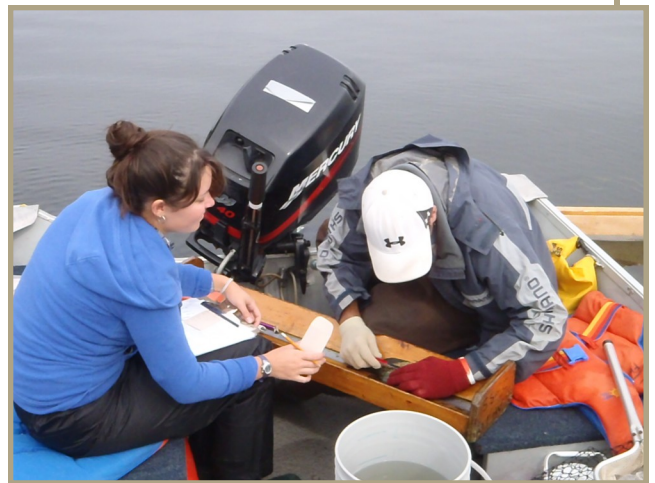
My name is Tom Howson and I am a second year student at Sir Sandford Fleming College in Lindsay, Ontario. I am enrolled in the Fish and Wildlife Technology program, a three-year diploma course that is directly transferrable to degree programs at several Canadian universities. As a required component of the third semester, each student must complete either a five day fisheries or wildlife camp. I chose the fisheries camp. In this article I will briefly describe what occurs at the fisheries camp and how it benefits students.

The fisheries camp is held on one of the Kawartha Lakes, Sturgeon Lake, just outside the town of Lindsay, Ontario. The college conducts an annual fall NSCIN (Nearshore Community Index Netting) survey, following provincial (Ontario Ministry of Natural Resources; OMNR) index netting protocols. Five, six foot trap nets were rotationally set on a total of 32 sites, over a 15 day survey period. A total of 60 trap net lifts were conducted at the camp. Students learn: basic seamanship and boat operation skills, setting and packing of trap nets, beach seining and forage fish identification, fish handling, processing and measurement, fish tagging, collection of calcified structures for age and growth determination, and field data compilation (data sheets, scale envelopes, sample documentation).

Fisheries data has been collected each fall since 1998, in partnership with the OMNR. This long term data set has allowed OMNR to track population trends and the overall health of the fishery. Of particular interest is the recreational walleye fishery, which has declined since a mid 1990's zebra mussel invasion. A walleye mark-recapture study was initiated by the college in 2003, in order to estimate annual walleye mortality and generate a population estimate. A numbered sequence of dorsal spines are removed from all processed walleye during the camp, and students note recaptures from previous year clips. The camp provides an excellent opportunity for students to be involved in a real world index study while learning and practicing many aspects of fisheries fieldwork.

For each week of camp, the students are divided into roughly six boat crews of four. The groups remain the same over the course of the week so that the students can work on the team building skills necessary to efficiently collect and process fisheries information.

The standard OMNR data collection protocol was used for fish processing. Total length, fork length, and weight were measured. Scale and dorsal spine samples were taken from all fish sampled. A subsample of the panfish catch was intentionally sacrificed during the camp; students learn how to humanely euthanize fish in the field, assess sex and degree of





## Fall Fish Camp Journal (continued)

gonadal maturity, learn basic internal fish anatomy, identify stomach contents, and remove otoliths for age assessment. All species were thoroughly examined in order to gain better understanding of the physical features of each species. The age structures collected by each group during the camp are used throughout the remainder of the semester as students learn how to process the structures and interpret the age of the fish.

Another skill that students acquired during this week was fish tagging. The three types of tags used included external FLOY dart tags (gun application), external FLOY disc (Atkins) tags (suture needle application), and internal (gill cover) PIT tags. The pit tags were only used for muskellunge. The dart and disc tags were applied to smallmouth and largemouth bass, walleye, and some of the black crappie. We were lucky enough to recapture some of the walleye and largemouth bass that our group had tagged this year.

Along with the trap netting and fish processing, each crew spent a day collecting limnological data. A standard vertical water chemistry series station was surveyed from an anchored boat. Water chemistry tests included dissolved oxygen, pH, T.F.E. alkalinity, conductivity, and total dissolved solids. Students were exposed to a wide range of field gear, including Kemmerer and Alpha bottles, Secchi discs, conductivity meters, YSI field meters, thermisters, etc. Students also performed plankton tows and Ekman benthic dredges to collect samples of various planktonic and benthic organisms. Each student collected a benthic biomonitoring invertebrate sample as they sampled a transect using a kick screen and the "kick and sweep technique". The invertebrates collected were preserved for closer identification in limnology class next semester. It is important for the students, whether becoming technicians or biologists, to learn about and understand the basic components of the aquatic ecosystems in order to gain a better understanding of the lake's ecology.

This fisheries camp demonstrates to students the depth to which today's technicians are being trained. The fact that the information we collect is actually used for the monitoring and management of the Sturgeon Lake fishery makes this experience especially meaningful. We have been given the "hands on" training that will prepare us for natural resource jobs in the future. In this program we learn the proper data collection and sampling techniques and the importance of these key components in the overall fisheries management process. I believe that the experience gained at the Sir Sandford Fleming College fall fisheries camp ensures the development of the necessary attitude and skill set required for future fisheries technicians.





# 2010 Business Meeting Minutes

Minutes of the Annual Business Meeting—Education Section  
2010 Annual Meeting of the American Fisheries Society  
September 12, 5-7 pm, Allegheny Room, Westin Hotel, Pittsburgh.

**Call to Order**—Meeting was called to order by President Steve Chipps at 5:20 pm.

**Introduction of Guests**—Chipps recognized current officers of the Education Section, including the immediate Past-President, Tom Kwak; President-Elect, Mike Quist; and the Secretary-Treasurer, Craig Paukert. Chipps then recognized Past-Presidents of the Education Section in attendance, including Tom Kwak, Brian Murphy, Donna Parrish, Joe Margraf, and Wayne Hubert.

**Determination of Quorum**—A quorum (10% of membership) was present and confirmed by Paukert.

**Approval of Agenda**—Chipps introduced agenda. Joe Gerken moved to approve the agenda as written; Jim Long seconded the motion. Motion carried.

**Approval of Minutes from 2009 Business Meeting**—Christine Moffitt moved to approve the minutes from the 2009 Education Section meeting as written; Mike Colvin seconded the motion. Motion carried.

**President's Comments**—Chipps mentioned the recent emphasis in AFS on education and indicated that several papers from the symposium at the 2009 AFS meeting in Nashville are being published in *Fisheries* as a special section. Chipps encouraged the members to read these articles that will be published over the next year. Chipps then indicated that the Section has several book projects (that will be described later in the meeting) and indicated the Section supported Student Colloquia for the Western Division (Colorado State University) and the North Central Division (Kansas State University) and will support another Western Division Symposium (University of Idaho) this year. In addition, the Section also supported the Equal Opportunities Section travel awards again this year. Chipps finished his remarks by discussing that the Education Section will receive increased AFS visibility over the next few years because of the education emphasis by AFS President-elect Wayne Hubert. Chipps also challenged the membership to think about new book projects. The Section has been very active in participating and supporting book projects, but many of them have been revisions to previous editions.

**Treasurer's report**—Paukert presented the Treasurer's report. Total assets of the Section as of August 31, 2010 were \$190,288.59. The balance forward from August 30, 2009, was \$185,028.01, income from the previous year was \$21,149.20, and expenditures were \$15,888.62. Paukert also noted that the Education Section has contributed \$38,570 to the Skinner Memorial Fund as part of the Incredible Skinner Challenge. In addition, 2 chapters, 9 sections, 2 divisions, 6 individuals, and 1 private organization have also contributed \$13,570 to the Skinner Funds for a total of \$52,140 donated as part of the Incredible Skinner Challenge. Paukert then noted that the Education Section has 535 members; 278 (52%) of those members are students and 34 are young professionals.

**Report by AFS officer**—AFS President-elect Wayne Hubert mentioned that his upcoming presidency will focus on fisheries education. His emphasis for the AFS presidency will be based on workforce needs in the future. This emphasis started with the governing board retreat where educators and agency representative discussed the future workforce needs and the role of graduate and undergraduate education to meet those needs. President-elect Hubert then mentioned that there will soon be a topic-oriented meeting related to education that will be sponsored by the Coalition of Natural Resources Societies, which includes AFS, The Wildlife Society, Society of American Foresters, and the Society for Range



## 2010 Business Meeting Minutes (continued)

Management. Finally, President-elect Hubert indicated an additional goal to improve the AFS website and that the Governing Board has already approved \$25,000 for this effort.

### Committee Reports

Newsletter: Newsletter co-editor Joe Gerken spoke on behalf of himself and the other co-editor, Jesse Fischer. Gerken thanked those who have contributed to the newsletter and mentioned there was a change in the timing of the delivery of the newsletter. The newsletter will now be distributed in summer prior to the AFS meeting (June or July) and about six months later in January. Gerken commented that the hardest component of serving on the committee is obtaining submissions and asked that anyone with something to contribute please contact him or Fischer.

Web page: Webmaster Steve Ranney could not make the meeting. Chipps encouraged members to contact him if there were any questions or comments.

Excellence in Fisheries Education: Jason Vokoun described the award and nomination procedure and thanked committee members for their service. He noted that committee members serve a three-year term and that a PhD student and a representative from the North Central Division (NCD) are needed for the committee next year. Vokoun announced that the recipient of the Award this year was Dr. Thomas P. Quinn from the University of Washington. Dr. Quinn was in Russia and could not make the meeting. Vokoun summarized Dr. Quinn's accomplishments.

Skinner Committee: Joseph Hightower thanked those who served on the 2010 John E. Skinner Memorial Award Committee. The Committee received 46 applications and was able to provide 10 Skinner Awards and five Honorable Mentions.

The 2010 Award winners were: Elissa Buttermore (North Carolina State University), Michael Colvin (Iowa State University), Devin DeMario (Penn State University), Michael Gatlin (Oklahoma State University), Zachary Penney (University of Idaho), Joshua Perkin (Kansas State University), Joshua Raabe (North Carolina State University), Kenneth Riley (East Carolina University), Patrick Shirey (University of Notre Dame), and Kelly Stockton (University of Idaho). Honorable mentions were: Corey DeBoom (University of Illinois), David Janetski (University of Notre Dame), Bonnie Mulligan (Southern Illinois University), Catherine Murphy (Louisiana State University), and Stephanie Shaw (South Dakota State University).

Student posters/papers 2009: Jim Long presented the results from last year's student judging efforts. One best student paper (Stacy Beharry and two honorable mentions (Duncan Elkins and Ryan Utz) were awarded at the 2009 meeting. One best student poster (Justin VanDeHey) and one honorable mention (Clint Lloyd) were also awarded.

Program committee: Quist discussed the Governing Board retreat which had a focus of fisheries education. The retreat included presentations from state and federal agencies and academics about the challenges of educating young professionals for the future, and how AFS can help in that role. The Education Section will be on the forefront of this endeavor and the next 3 years or so Education Section members will have opportunities to contribute to this mission.

Membership committee: Chipps presented on behalf the membership committee co-chairs, Mark Fincel and Kristal Schneider. The Education Section would like to continue to promote its relatively new logo. Can cozies with the logo were created for the meeting and everyone at the Section meeting received one. The remaining cozies were provided at the registration desk for other attendees at no cost.

Nominating committee: Kwak noted that the Section voted for the Northeastern (NED) and NCD representatives. Steve Cooke was elected the NCD representative; Lisa Kerr was elected the NED representative. Tracy

### 2010 Business Meeting Minutes (continued)

Galarowicz (NCD) and Andy Danylchuk (NED) were thanked for also running for Division representatives and Kwak noted that both were willing to serve the Education Section in some capacity. Kwak also noted that next year elections will be held for the Section officer positions and encouraged the Section to strive for diversity in its leadership. The Section also produced a t-shirt that will be raffled off at the end of the meeting. David Willis was randomly chosen to receive a t-shirt from a list of all people that voted for division representatives.

#### Ad hoc committee & Special projects

Catfish 2010: The Education Section supported this symposium which was held in June 2010 in St. Louis. Over 200 people attended (including 21 students) and there were over 100 oral and poster presentations from 32 states and 5 countries. The Section was instrumental in ensuring that there was reduced registration for students, and two students (Steve Midway and Rebecca Krogman [formerly Burch]) received free registration on behalf of the Section.

Standard Methods for Sampling North American Freshwater Fishes. Norm Mercado Silva updated the Section on a proposal to provide an online database that summarizes common fishery indices (e.g., cpue, *Wr*). The purpose of the database is to provide a resource where managers can compare their data with regional standards. Norm asked for feedback on the utility of this idea, and asked for the Section to contribute funding to providing this online webpage. Steve Chipps mentioned that the Section has a formal online process for funding requests and encouraged Norm to submit the request through this process.

Fisheries Techniques (3<sup>rd</sup> edition). Donna Parrish told the Section that the book is making progress. The goal is to have all the chapters submitted to the editors by December 31, 2010, and to have the book published and available by the next AFS meeting in fall 2011.

Inland Fisheries Management in North America (3<sup>rd</sup> edition). Quist and Hubert are serving as editors for the third edition. Quist provided a brief history of the process of the book which started 2-3 years ago. He emphasized that this book has substantial new information compared to previous editions and is virtually a new book. He also mentioned that students were a part of the review process and each chapter was reviewed by a student. The book is currently being indexed and will be published in October 2010. Quist understands that academics may want to use this book for their classes, so contact him if you would like chapters in advance. Finally, Quist thanked all who contributed to the book and reminded the Section that the book was *under* budget. The Section allocated \$5,000 for graphic design, but the final cost was only \$1,880.

Scientific Communication book. Bruce Vondracek reminded the Section that this book is fairly broad and focused on scientific writing and not necessarily fisheries. However, the majority of authors have a fisheries background. There are 13 chapters; two are not yet completed. Nine chapters have been reviewed and are in the process of technical editing. The goal is to have the book available by next AFS meeting in fall 2011.

New Initiatives Committee. Committee Chair Derek Aday mentioned that the idea behind this committee was to generate ideas for new Education Section initiatives. The Section has the resources to develop new initiatives, but needs ideas. Some items being considered include building an online database for all continuing education courses (including regional and local courses), have an Education Section liaison on the continuing education committee, and have an Education Section liaison or link to the board of professional certification. Aday encouraged those with other ideas to contact him.

#### Additional Reports

Student Subsection: President Colvin reported that the Subsection remains active and highlighted several activities. First, there were two regional colloquia this year (Colorado State University and Kansas State University) with a planned colloquium at the University of Idaho this fall. The Subsection also put forth a motion to the Governing Board to make all students members of the Subsection. This would have increased student membership by \$3.00 with the pro-



## 2010 Business Meeting Minutes (continued)

ceeds going directly to the Subsection. The motion failed primarily because there was concern over increasing costs of membership, and that the motion forced students to belong to a particular group (the Student Subsection). Colvin indicated they were going to continue to work with the Education Section and develop more ideas to increase Student Subsection membership. The Subsection also will host the student symposium on Thursday at the AFS meeting. This is the largest symposium hosted by the Subsection and includes presentations from academics and agency biologists. Finally, the Student Subsection updated its webpage.

Hutton program update: Katherine Winkler discussed the summer mentoring program for high-school students and thanked the Education Section for its past support of the program through the R.F. Hutton endowment. Since many agencies cannot support endowments, the support of the Education Section to the endowment is particularly important. In 2010, there were 24 students in 16 states as part of the Hutton Program. About half of these students are minorities and two thirds are female. Winkler highlighted Elisha Sunflower Wildon, a Hutton student from 2008-2009 that recently received a full scholarship to the University of Arkansas-Pine Bluff. Winkler also highlighted the renewed partnership for the US Forest Service and the Hutton Program, and requested a donation of \$5,000 from the Education Section for the Hutton Endowment. Chipps reminded Winkler that the Section has a formal online process for funding requests and encouraged her to submit the request through this process. Kwak asked the membership if there was preference to contribute to the endowment or directly to the Hutton Program. The membership preferred to contribute to the endowment.

**Awards and Recognition**

Chipps presented numerous certificates of appreciation: Randy Jackson (NED representative), Mark Pegg (NCD representative; Mark was unable to attend); Stave Ranney and Mike Meeuwig (both for the website; both were unable to attend); Fischer and Gerken (newsletter editors).

**Old Business**

None

**New Business and Announcements**

Steve McMullin reminded the Section of a survey of introductory fish and wildlife students. The goal of this survey is to determine career interests of students. Steve still needs a larger sample size of universities so contact him if you want to participate.

Brian Murphy mentioned a recent book project that includes 32 case studies related to fisheries conservation and management. The book also has an instructor guide. Both the book and instructor guide are available through AFS.

Finally, a raffle was conducted for Education Section t-shirts. Garret Staines and Elissa Buttermore each received a t-shirt.

**Adjournment**

Colvin made a motion to adjourn; seconded by Vondracek.  
Motion carried at 6:50 pm

*Respectfully submitted by Craig P. Paukert, Secretary-Treasurer.*



*Craig Paukert is the leader of the Missouri Cooperative Fish and Wildlife Research Unit. He can be contacted at [paukertc@missouri.edu](mailto:paukertc@missouri.edu)*



## EDITORS' NOTE

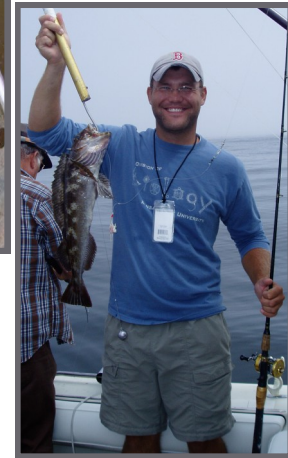
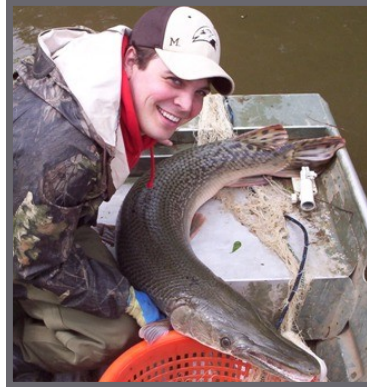
Feel free to contact us with any suggestions and comments. We would like to encourage submissions and ideas for next issue (July 2010). Contributions, comments and suggestion may be emailed to either of us at anytime.

Sincerely,

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## MEMBERSHIP COMMITTEE

The Membership Committee of the Education Section is proud to announce the establishment of the Young Professional Travel Award. We will be awarding one young professional with \$ 1,000 to cover travel and meeting costs for the annual meeting. All AFS young professionals are encouraged to apply. We've been working to finalize application requirements, and we're looking for a volunteer who will join the committee to help review applications. Other initiatives to retain current members, increase visibility of the Section, and attract new members from diverse disciplines are in progress. For example, we will order koozies again with the Education Section logo on them for the annual meeting in Seattle, and we've been developing plans to encourage science teachers at the secondary school level to become members.

These are just a few ideas that we have been developing. If you have any thoughts or suggestions or would like to help review applications for the Young Professional Travel Award, please e-mail Mark Fincel ([Mark.Fincel@sdstaate.edu](mailto:Mark.Fincel@sdstaate.edu)) and Kristal Schneider ([ewell002@umn.edu](mailto:ewell002@umn.edu)). We also welcome anyone who would like to become a member of the Membership Committee.