



AMERICAN FISHERIES SOCIETY

Education Section

Newsletter, Volume 28(1)

*newsletter formatting may change among email programs.

AFS Education Section Website: <http://www.fisheries.org/units/education/>

PRESIDENT'S LINE

Donna Parrish, Vermont Cooperative Fish and Wildlife Research Unit,
Donna.Parrish@uvm.edu



As we enter the summer I recognize that my term as President of the Education Section is coming to a close. **Tom Kwak** will be installed as the new president at the meeting in San Francisco. I am grateful to Tom for his leadership as president-elect during this last 1.5 years. Tom took the lead on revising our section bylaws to comply with our current practices. Additionally, **Steve Chipps** is completing his term as secretary-treasurer. Steve has done an excellent job of keeping up with our finances and other business issues. I wish to thank him for the entire section since his role has been so critical to our functioning well as a section.

You wouldn't be reading this message without our outstanding newsletter co-editors, **Becky Zeiber** and **Dan Dauwalter**. Newsletters are time consuming to put together. Becky and Dan have been great to work with and have kept those of us that have trouble meeting deadlines on task.

Randy Jackson, Northeastern Division Representative, completed work on the evolution resolution for the Section. Randy provided us with background documentation for the resolution, which we passed earlier this spring. The resolution will be coming up for a vote by the whole society in San Francisco. Thanks, Randy, for your thoroughness in researching the issue and drafting such a well-written document.

Another area of importance for the Section to address these two years has been the student paper and poster judging. Under the leadership of **Trent Sutton**, we are sponsoring a Best Student Paper Symposium at the meeting in San Francisco. From these student presentations, a panel of judges will select the best paper of the symposium. The plan is to have the winner recognized at

the Society business meeting on Tuesday afternoon of the meeting. A separate panel will evaluate the posters that were submitted to be judged. For all the other student presentations, we are working on a system of voluntary feedback that should provide a better critique of a presentation. Feedback will be timely; i.e., students can pick up their feedback at the end of the session in which they gave their presentation. Trent deserves our gratitude for taking some bold steps in revamping the judging of student papers and posters.

The Section continues to work diligently on book projects. The 2nd Edition of Employment in Fisheries Sciences edited by **Dave Hewitt**, **Al Zale**, and **Bill Pine** came out in fall 2006. The other books sponsored by the section are: Analysis and Interpretation of Freshwater Fisheries Data—out soon, and Fisheries Techniques 3rd Edition—in 2008. **Cecil Jennings** has been working with some potential co-editors on revising Writing for Fishery Journals. We hope to have a report on their progress at the annual meeting. Two of our section members, **Wayne Hubert** and **Mike Quist**, have begun work on the 3rd Edition of Inland Fisheries Management in North America.

I have one request from our membership over the next few months. As **Tom Kwak** (tkwak@ncsu.edu) begins filling the leadership positions of the Section for next year, please step up and get involved. While you are at it, try to recruit your students and colleagues to the Section. We need to not only increase our numbers, but also our diversity.

For those who have been actively involved, I really appreciate your dedication to the Section. I hope to see you at the business meeting in San Francisco. Please note the meeting is at 3 p.m. on Sunday, September 2. We will have some hors d'oeuvres and beverages for attendees.

As always, please contact me if you have any questions, suggestions, or concerns about the Section (Donna.Parrish@uvm.edu).

STUDENT SUBSECTION

Jeff Jolley, South Dakota State University, jeffrey.jolley@sdstate.edu

President Elect **Melissa Wuellner** and member **Eric Howe** recently worked with **Gwen White** (AFS Constitutional Consultant) to complete revisions of our bylaws that were unanimously approved by the Subsection membership. The Subsection has also taken advantage of the new web-based services offered by AFS by establishing two new e-mail list serves (many thanks to **Joe Euker** for his assistance). One listserv (studentsubsection@fisheriessociety.org) includes all subsection members, and has helped to foster productive communication and discussion. The second (students@fisheriessociety.org) includes all AFS student members, and has been used to disseminate information about job openings, travel awards, and other opportunities of interest to AFS student members. Anyone who would like to post a message to these listserves is encouraged to e-mail it directly to the above-mentioned addresses or contact **Justin Davis** (justin.p.davis@huskymail.uconn.edu).

The Subsection has been working to solicit more Student's Angles. We have had three published since last October. This has been an improvement over the recent past and we are always looking for more submissions. We encourage any student with an idea for a Student's Angle to contact **Justin Davis** (justin.p.davis@huskymail.uconn.edu) and we also encourage educators to let their students know about this opportunity. The following are our recent titles:

Trumbo, B. 2006. Tales of a novice-run bass tournament. *Fisheries* 31(11):566-567.

Jolley, J.C. and B.D.S. Graeb. 2007. Writing, publishing, and reviewing: the students' perspective. *Fisheries* 32(1):40-43.

Gonsalves, L. 2007. Expanding minority participation in AFS and fisheries science: a student's perspective. *Fisheries* 32(2):96-97.

The Subsection will hold its meeting at the San Francisco Annual AFS Meeting on Wednesday, September 5th from 5:00-6:30pm. In an effort to improve attendance, we've scheduled our meeting independently of the Education Section meeting (to be held on Sunday, September 2nd). This experimental step was taken in response to concerns that holding the Subsection meeting early in the week (before many students arrive) and immediately after the Education Section meeting (when many folks have "meeting burnout" and are ready to leave) was detrimental to attendance in recent years. We also plan to advertise the subsection meeting over the society-wide student listserve in an effort to approve attendance. The Subsection, in conjunction with the San Francisco Meeting Planning Committee, is also planning a student colloquium for the afternoon of Tuesday, September 4th. The colloquium will focus on publication in peer-reviewed journals, and will feature 3-4 speakers and an extended discussion period. Topics to be addressed will include the elements of good writing, the peer-review process, and deciding on an appropriate journal.

Plans for the near future include drafting a Procedural Manual for the Subsection. We have also been discussing ways to better link our division representatives to regional student sub-units and thereby establish a better connection between the Subsection and the many active student sub-units within AFS. Finally, a website for the Subsection is under development and hopefully can be launched in the near future.

Student Subsection Current Leadership:

President: **Justin Davis**

President Elect: **Melissa Wuellner**

Past President: **Michael Bailey**

Secretary-Treasurer: **Jeffrey Jolley**

North Central Division Representative: **Jeff Eitzmann / Kristal Ewell**

Southern Division Representative: **Mary Pearl**

Western Division Representative: **Jeff Falke**

Northeastern Division Representative: **Chris Holbrook**

Canadian Division Representative: **Caleb Hasler**

COMMITTEE REPORTS

SKINNER MEMORIAL AWARD

Craig Paukert, Kansas Cooperative Fish and Wildlife Research Unit, cpaukert@ksu.edu

Skinner Memorial Award Update

The 2007 Skinner Memorial Award had 57 applicants, which are currently under review by the committee. We had all levels of education represented by the applicants, with four applicants at the BS level, 34 at the MS level, and 19 at the PhD level. We also had applicants from India, Puerto Rico, Canada, and the US. Award winners and honorable mentions will be announced in late June 2007. This year the committee decided to increase the award from a maximum of \$600.00 to \$800.00, primarily because the high cost of San Francisco. Each Award winner will be reimbursed up to \$800.00 for their travel to the 2007 American Fisheries Society Annual Meeting September 2-6, 2007 in San Francisco, California. Honorable Mentions will receive reimbursement for their registration at the Annual Meeting. All winners (including honorable mentions) receive a one-year student membership to the AFS as well.

2007 Skinner Committee:

Craig Paukert (KS), Chair
Michael Bailey (ME)
Patrick Braaten (MT)
Dan Dauwalter (WY)
Joe Hightower (NC)
John Hoxmeier (MN)
Mark Pegg (NE)
Jason Vokoun (CT)

The Award winners and Honorable Mentions will be expected to come to the Education Section and Society business meetings as well as the AFS awards luncheon.

AIFFD BOOK COMMITTEE

Michael Brown, South Dakota State University, michael.brown@sdstate.edu

The cover design for Analysis and Interpretation of Freshwater Fisheries Data has been completed and proofs for the 18 chapters have been through final reviews by the technical editor and co-editors. Currently, the book program office is incorporating the last changes suggested by the co-editors. Plans are to have the book available at the San Francisco meeting in September.



BEST STUDENT AND PAPER AWARD COMMITTEE

Trent Sutton, University of Alaska—Fairbanks, tsutton@sfos.uaf.edu

Judging of student paper and poster presentations at the 2007 Annual Meeting of the American Fisheries Society will follow a different protocol from previous years (see **PAPER AND POSTER JUDGING CHANGES COMMITTEE** report below for those details). As such, 15 students will be giving oral presentations during the Best Paper Symposium and 3 students will be giving their poster presentations during the Best Poster Symposium (see the list of students, their affiliations, and their paper and poster titles below). Additional details for these symposia will become available later this summer. Currently, a judging panel is being assembled, which will allow for standardization of the judging process. If you have any questions, comments, or concerns, please contact **Trent Sutton** (tsutton@sfos.uaf.edu).

Best Paper Symposium

Steven Cadrin (University of Maryland-Eastern Shore). Co-authors: **Thomas Miller** and **Eric May**.

Evaluating a movement-mortality model for Yellowtail flounder (*Limanda ferruginea*) in the Northeastern United States through a simulation approach.

Nathan M. Bacheler (North Carolina State University). Co-authors: **Joseph Hightower**, **Jeffrey Buckel**, **Lee Paramore**, and **Kenneth Pollock**.

A novel combined telemetry and tag return methods to estimate fishing and natural mortality rates of an estuarine fish species.

Ivy E. Baremore (University of Florida). Co-authors: **Debra Murie** and **John Carlson**.
Prey selection by the Atlantic angel shark in the northeastern Gulf of Mexico.

Ayeisha A. Brinson (University of Miami). Co-author: **David Die**.
Addressing poverty and fisheries: a livelihoods approach.

William Dailey (Texas A&M University). Co-author: **Cindy Howard**.
Status of black drum in Texas: landings, fishing pressure and abundance by year and embayment

Jon M. Flinders (University of Arkansas). Co-author: **Dan Magoulick**.
Trophic interactions and foraging patterns of brown and rainbow trout in Ozark tailwaters: a stable isotope and gut content analysis approach

Kiza K. Gates (Montana State University). Co-authors: **Christopher Guy, Alexander Zale, and Travis Horton**.
Angler movement and sediment transport: implications for moving aquatic nuisance species

Ryan A. Harnish (Montana State University). Co-authors: **Alexander Zale and Christopher Clancy**.
Efficacy of fish screens at preventing entrainment of native inland salmonids.

Carrie A. Holt (Simon Fraser University). Co-author: **Randall Peterman**.
Uncertainties in population dynamics and outcomes of regulations in sockeye salmon fisheries: implications for management.

Kendra R. Holt (Simon Fraser University). Co-author: **Sean Cox**.
Evaluation of visual survey programs for monitoring salmon escapement.

Heidi A. Lewis (Southern Illinois University). Co-author: **Christopher Kohler**.
Minimizing fish oil and fish meal in sunshine bass diets without negatively impacting growth and fillet fatty acid profile.

Lingbo Li (University of Bergen). Co-authors: **Hans Høie, Audrey Geffen, Henrik Mosegaard and Arild Folkvord**.
Otolith growth and back-calculation of previous fish size based on individually tagged and alizarin multi-marked Atlantic cod

Anthony R. Marshak (University of Puerto Rico). Co-author: **Richard Appeldoorn**.
Evaluation of season closure of red hind (*Epinephelus guttatus*) spawning aggregations to fishing off the west coast of Puerto Rico using fishery-dependent and independent time series data.

Michael H. Meeuwig (Montana State University). Co-authors: **Christopher Guy and Steven Kalinowski**.
Influence of landscape structure on genetic structure of bull trout in Glacier National Park, Montana.

Edmund Priddis (Brigham Young University). Co-authors: **Russell Rader and Mark Belk**.

The effects of temperature on the interaction between invasive and native fish: do invasive species have an “Achilles heal”?

Best Poster Symposium

Nathan M. Bacheler (North Carolina State University). Co-authors: **Jeffrey Buckel**, **Lee Paramore**, and **Fred Scharf**.

Spatial and temporal patterns of recruitment of North Carolina red drum.

Diana E. Sweet (University of Wyoming). Co-author: **Wayne Hubert**.

Age and growth of bluehead suckers, *Catostomus discobolus*, flannelmouth suckers, *Catostomus latipinnis*, and white suckers, *Catostomus commersonii*, in the Big Sandy and Little Sandy rivers of Wyoming.

Melissa R. Wuellner (South Dakota State University). Co-authors: **Bethany J. Galster**, **Brian D. S. Graeb**, **Trevor M. Selch**, **Steven R. Chipps**, and **David W. Willis**.

Integrating basic and applied research in determining whether competition exists between two top-level predators in South Dakota Missouri River reservoirs

PAPER AND POSTER JUDGING CHANGES COMMITTEE

Trent Sutton, University of Alaska—Fairbanks, tsutton@sfos.uaf.edu

Below is the January 2007 article from *Fisheries* (pages 42-43) that details the planned changes for judging student paper and poster presentations at the Annual Meeting of the American Fisheries Society in San Francisco, California. An example of the extended abstract, which is referenced below, is included following the article. Any questions, concerns, or comments should be directed to **Trent Sutton** at tsutton@sfos.uaf.edu.

Time For A Change: Revision of the Process For Judging Student Presentations at the Annual Meeting

Trent M. Sutton, Donna L. Parrish, and James R. Jackson

The number of student presentations given at the Annual Meeting of the American Fisheries Society (AFS) has increased steadily each year from 17 (1989) to 336 (2006). The increase has created challenges in determining the Best Student Paper and Best Student Poster Awards. For example, securing enough judges to evaluate the presentations in a consistent manner is an ongoing challenge. For the 2006 Annual Meeting, there were 256 papers and 80 posters presented by students. With a target of three judges per paper and four judges per poster, a total of 251 different judges were required to cover the 1,088 judging events. Even though this target number was secured prior to the meeting, 130 of the 1,088 judging events (12%) were not evaluated during the meeting. As a result, some students only received feedback from one or two judges and could not be considered for one of the awards. Variability in judging consistency

was also high, with some students receiving scores that ranged as broadly as 40 points (e.g., 54 to 94 out of 100) or as narrowly as 3 points (e.g., 71 to 74 out of 100). As a consequence, this variability more than likely plays as large a role in the outcome of the judging process as the quality of the presentations themselves. The *ad hoc* Paper and Poster Judging Changes Committee of the Education Section was created to develop a solution to alleviate problems in presentation judging. Respondents to an Education Section newsletter survey echoed the problems observed in 2006 and identified obtaining and scheduling judges, inconsistency of evaluations across judges, and a lack of timely and useful feedback to students as the primary problems with the current judging system. Given these concerns, how does the Education Section fix the problems?

During fall 2006, members of the *ad hoc* Paper and Poster Judging Changes Committee and the Education Section Executive Committee developed a more manageable and equitable process for determining student presentation award winners. These changes will be implemented for the 2007 Annual Meeting in San Francisco, California, as a trial for the new process. The steps in this process are outlined below, but student presenters will need to consult the Education Section website or the Annual Meeting section on the AFS webpage for details.

Abstract Submission. – Students will be required to submit an abstract that follows the guidelines described in the Call for Papers in *Fisheries*. On their abstract, the student must indicate if they wish their abstract to be considered for competition for a best presentation (i.e., paper or poster, but not both) award. If they respond “no”, the presentation will be considered for inclusion in the Annual Meeting by the Program Committee but will not receive further consideration by the Judging Committee. If students indicate “yes”, they will be required to submit an application directly to the Judging Committee. Components of the application will include an extended abstract and a check-off from their mentor indicating that the study is at a stage appropriate for consideration for an award. An example of the extended abstract is posted on the Education Section and AFS websites and will include the following: title, authors and affiliations, background, methods, results (including up to five figures and/or tables), discussion, and references (see below for an example as well). The discussion should include how the research advances knowledge of fisheries theory and/or management and what the most significant finding is and why. Extended abstracts will be limited to three pages in length and must be written in 12-point Times New Roman font with 1” page margins. The deadline for submission is 23 February 2007; applications that do not follow the format guidelines will not be considered for an award.

Application Review. – The Judging Committee will review submitted applications and evaluate them in terms of scientific merit, writing style, and mechanics. By 02 March 2007, the top twenty papers and top twenty posters will be selected for inclusion in special symposia to be held at the Annual Meeting. Finalists will be notified and given the option of participating in one of these symposia or remaining in an invited or contributed session. Students not selected for one of these symposia or those that decline inclusion will be assigned to an appropriate symposium by the Program Committee.

Symposia. – A symposium of oral presentations selected as finalists for the Best Paper Award will be hosted by the Education Section over two half days (ten presentations each day). Posters

will be given during the regular poster symposium; however, finalists will be grouped together in one area and identified appropriately. Judging will be conducted by a panel of judges using a standardized grading rubric. Judging panels will be consistent for each award category in order to ensure equity in scoring. Student papers will also be videotaped and copies of the presentations will be provided to the judges for additional review following the session. Similarly, judges will be provided with copies of student posters for similar post-presentation review. Because each presentation will be evaluated by the same judges, there will be greater consistency in the judging process and feedback will be more rapid. The Best Student Paper and Poster Awards will be announced later that fall and the winners will receive their awards at the following year's AFS meeting.

Feedback. – Students in regular invited or contributed paper and poster sessions will also have an opportunity to receive feedback. Evaluation forms will be distributed to willing evaluators, and the forms will be collected and provided to the student following his/her presentation or symposium.

Proposed changes to judging student presentations should help to alleviate the problems that have plagued the process in recent years. However, the *ad hoc* Paper and Poster Judging Changes Committee will carefully monitor the new process and make changes as experience is accrued. Because feedback is critical, the Education Section strongly encourages comments and suggestions to ensure that the judging format meets the needs of both the student presenters and the AFS membership.

*Sutton is an Associate Professor in fisheries biology in the Department of Forestry and Natural Resources at Purdue University and can be reached at tsutton@purdue.edu. Parrish is the Unit Leader for the U.S. Geological Survey, Vermont Cooperative Fish and Wildlife Research Unit and is a Research Associate Professor in the Rubenstein School of Environment and Natural Resources at the University of Vermont. Jackson is a Senior Research Associate at the Cornell Biological Field Station.

Extended Abstract Example

Growth and feeding dynamics of lake sturgeon, *Acipenser fulvescens*, in Oneida Lake, New York: preliminary results from a restoration program

James R. Jackson, Cornell Biological Field Station, Department of Natural Resources, Cornell University, 900 Shackleton Point Road, Bridgeport, New York, USA 13030; 1-315-633-9243 (telephone); 1-315-633-2358 (FAX); jrj26@cornell.edu

Lake sturgeon, *Acipenser fulvescens*, historically occurred throughout the Great Lakes watershed of New York, but overharvest and environmental alterations led to dramatic reductions in abundance across the state in the early 1900's (Carlson 1995). Records suggest the species once occupied the Oswego drainage of Lake Ontario, including Oneida Lake, but reports since the early 1900's are scarce (Carlson 1995). As part of a comprehensive management plan for imperiled species, the New York Department of Environmental Conservation/Bureau of

Fisheries (NYDEC) recently implemented a stocking program directed at restoring lake sturgeon populations in several systems. Information on juvenile sturgeon dynamics is scarce, as is information on restored populations, but both are needed to guide future rehabilitation programs.

Oneida Lake is a large (207 km²), shallow, eutrophic lake in central New York with a mean depth of 6.8 m and a maximum depth of 16.8 m. Fisheries research by Cornell University began on Oneida Lake in the 1950's, and continues to this day. A stocking program to restore lake sturgeon to Oneida Lake was initiated by the NYDEC in 1995 and additional stockings have been conducted in every year except 1997 (Table 1). Lake sturgeon were first collected in experimental gill net surveys in 1996 (5 fish) and captures

Table 1: Lake sturgeon stocking records for Oneida Lake, New York, 1995-2000.

Year	Number Stocked	Age/Size at Stocking
1995	5,000	Age-0 (254 mm)
1996	500	Age-0 (178 mm)
	50	Age-1 (560 mm)
1997	0	None
1998	287	Age-1 (216 mm)
	100	Age-1 (369 mm)
1999	300	Age-0 (217 mm)
	20	Age-4 (900 mm)
2000	300	Age-0 (189 mm)

have continued to date (33, 12, 23, and 26 in 1997-2000, respectively). Additional sturgeon are collected in trap nets, bottom trawls, and beginning in 1999, a 152-mm stretch mesh multifilament gill net was employed specifically to monitor sturgeon population dynamics (26 fish captured in 1999; 67 in 2000). Captured sturgeon are measured (TL, mm), weighed, stomach contents assessed by gastric lavage, and a section of fin spine removed for aging prior to release. The objectives of the current paper are to report growth rates and diets of juvenile lake sturgeon in Oneida Lake as a case study of the early stages of a reintroduction of the species within its historical range. Where data are available from comparable age-classes, comparisons of growth rates and condition are made with other lake sturgeon populations.

Length-at-age of Oneida Lake sturgeon indicates rapid growth through age-4 relative to other systems from which juvenile growth data are available (Fig. 1). Growth in length was linear through age-4 for Oneida sturgeon and annual growth increments were greater than 150 mm between all age classes. Fortin et al. (1996) found a positive correlation between mean TL at ages 23-27 and mean annual air temperatures in a survey of 32 lake sturgeon populations. Air temperatures at Oneida Lake fall near the upper end of the range examined by Fortin et al., and we have records of age-4 lengths that already exceed those they report for age 23-27 fish from many more northern systems.

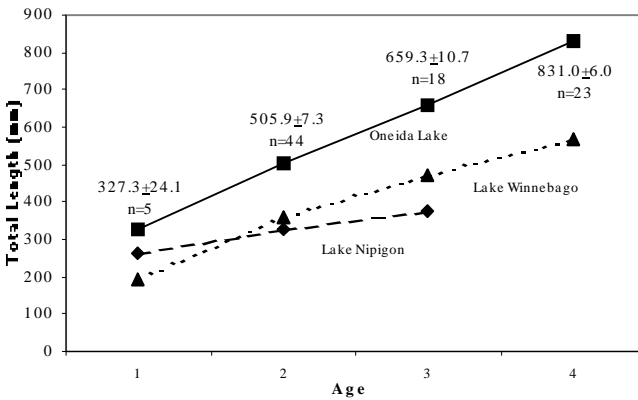


Fig. 1: Length at age (mean TL ± 1 SE and sample size) for lake sturgeon from Oneida Lake, New York, and Lakes Winnebago, Wisconsin and Nipigon, Ontario (from Carlander 1969).

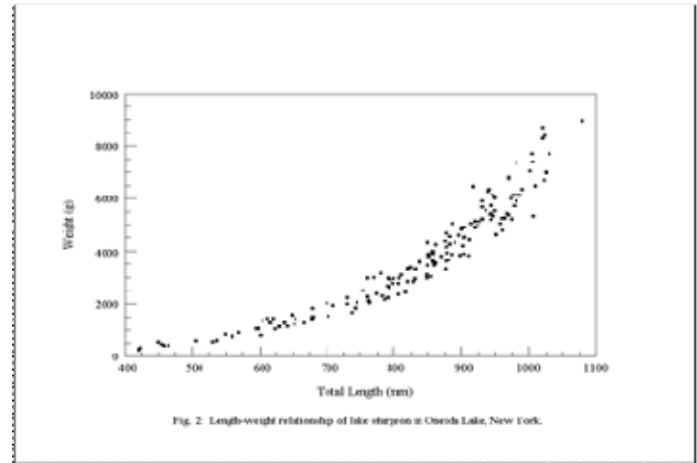


Fig. 2: Length-weight relationship of lake sturgeon in Oneida Lake, New York.

Length-weight relationships of lake sturgeon in Oneida Lake, like length-at-age data, indicate a population exhibiting rapid growth (Fig. 2). Relative to other systems with data sets that include juveniles, weight increases per unit length in Oneida Lake sturgeon are quite high. The regression coefficient for the log-transformed length-weight equation for Oneida Lake sturgeon is 3.63, compared to 3.30 for Lake Winnebago (Probst and Cooper 1954) and 3.33 from the St. Lawrence River (reported in Carlander 1969). Condition ($K=(W/L^3)*X$) of juvenile lake sturgeon in Oneida Lake is comparable to that reported for adult populations from other systems. $K_{(FL)}$ for Oneida Lake sturgeon is $0.73(\pm 0.01)$, compared to 0.74 in the St. Lawrence River (reported in Carlander 1969), and $K_{(TL)}$ in Oneida is $0.58(\pm 0.01)$ as compared to 0.60 in Lake Winnebago (Carlander 1969). Given that K tends to increase as fish size increases (Priegel and Wirth 1975), our values for juvenile sturgeon indicate excellent growth in Oneida Lake.

Qualitative assessments of the diets of juvenile lake sturgeon in Oneida Lake reveal that they utilize a wide variety of foods (Fig. 3). Amphipods occur most commonly in the diets of sturgeon of all sizes, with snails also occurring as a common diet item regardless of fish size. Less common food items include fish, caddis flies, chironomids and isopods. Zebra mussel (*Dreissena polymorpha*), first found in Oneida Lake in 1991, were utilized by sturgeon greater than 700 mm TL, and were the most common food item in the diets of the largest size-classes observed in this study. We are not aware of another published study where mollusks have been found to be such an important item in the diets of lake sturgeon, and the possible impacts of an expanding sturgeon population on the exotic zebra mussel warrants further study.

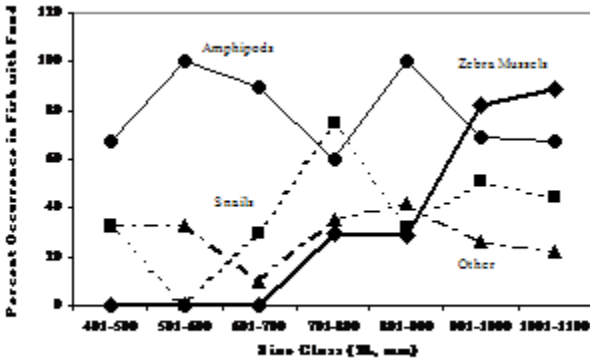


Fig. 2. Diet composition of juvenile lake sturgeon in Oneida Lake, New York. Category "Other" includes all fish, crustaceans, mollusks, insects, other invertebrates, and other matter.

Our results suggest that the restoration of lake sturgeon in Oneida Lake through stocking has thus far been a success. Growth rates are rapid relative to those reported for juveniles in other systems, and the condition of fish suggests that food resources are more than adequate for the current density of sturgeon. Continued studies will be directed at further examining growth rates as the population ages, attempting to identify preferred habitats and movement patterns, and ultimately assessing the potential for the population to sustain itself through natural reproduction.

References:

- Carlander, K.D. (1969). Handbook of freshwater fishery biology, volume 1. Iowa State University Press, 752 pp.
- Carlson, D.M. (1995). Lake sturgeon waters and fisheries in New York State. *J. Great Lakes Res.*, Vol. 21, pp. 35-41.
- Fortin, R., P. Dumont, and S. Gu nette. (1996). Determinants of growth and body condition of lake sturgeon (*Acipenser fulvescens*). *Can. J. Fish. Aquat. Sci.*, Vol. 53, pp. 1150-1156.
- Priegel, G.R., and T.L. Wirth. (1975). Lake sturgeon harvest, growth, and recruitment in Lake Winnebago, Wisconsin. Wisconsin Department of Natural Resources Technical Bulletin 83, 24 pp.
- Probst, R.T., and E.L. Cooper. (1954). Age, growth, and production of the lake sturgeon (*Acipenser fulvescens*) in the Lake Winnebago region, Wisconsin. *Trans. Am. Fish. Soc.*, Vol. 84, pp. 207-227.

Key Words: lake sturgeon, *Acipenser fulvescens*, restoration, growth, feeding

Preference: oral presentation

Audio Visual Equipment Requirement: PowerPoint computer

MISCELLANEOUS

“PEACE CORPS SERVICE—AND BEYOND”

Jim Reynolds, Professor Emeritus, University of Alaska—Fairbanks, ffjbr@uaf.edu

After nearly 30 years in fisheries work at the University of Alaska Fairbanks, I wanted to put my experience to work in a service setting. I applied to Peace Corps and in September 2003, went to Fiji with 25 other trainees as part of Fiji Re-Entry Group 1. Peace Corps had enjoyed success in Fiji for 30 years (1968-1998) before saying, “mission accomplished”. After a 5-year Peace Corps absence from Fiji, FRE-1 was the first to return, at the request of the Fiji Government.

I could not have had a better Peace Corps assignment if I had been free to design one for myself. Because of my fisheries experience, I was assigned to work at the Institute of Applied Science, University of the South Pacific, in the capital city Suva. I had wonderful day-to-day support from my counterpart, Alifereti Tawake, a science officer for the IAS. My assignment was overwhelming, but for a different reason than most Peace Corps Volunteers (PCV) who struggle to define their new role: I struggled to sort out all the possibilities presented to me.

One day, I was in a meeting of local representatives of the Locally-Managed Marine Area network. The LMMA is a coalition of marine conservation organizations in the Indo-Pacific dedicated to sharing lessons among communities trying to manage their local fishing grounds; it is very active in Fiji. They had a big problem: lots of field data but no system to manage or analyze it. LMMA was considering a contract with a local bank to develop a database but the more I learned about it, the more I realized that they were about to touch a very expensive subject that could get very complicated! Should I speak up or stay in my place? I half-raised my hand and all eyes turned to me. I took a deep breath and explained that lots of computer software already existed for the LMMA to develop it’s own data management and analysis (DMA) system at a substantial savings and with independence to revise the system as needed. “But our group lacks the expertise to develop such a DMA system,” was the response. My heart raced even more: I heard myself say, “I’ve done this before, it’s not that difficult.” With that statement, I naively stumbled into one of the most difficult challenges of my life!



Fast-forward two years. My service as a PCV is over and the DMA system is complete; has been tested in numerous workshops; is in use in Fiji, Indonesia, Papua New Guinea, Philippines and Palau; and my “understudy”, a young Fijian with a new Master’s degree, Ron Vave, is the new LMMA network data manager. Although most of my life as a PCV was consumed by the DMA system, I have also had the satisfaction of helping another Master’s student with her research on ecological impacts of coral harvest, and mentoring many USP students in the use of technical English for writing and speaking. Now it’s all over, right?

Since finishing my PCV service in 2005, I've been gratified to watch the Peace Corps goal of developing human capacity at work in the LMMA—and been privileged to assist in the continuing development of that capacity. In February 2006, I went to Indonesia to further train data managers in that country. The participants worked 14-hour days during the workshop. When asked why they were working so hard, they said, "For the first time, we are giving reports to our villages so they can make decisions with knowledge". I returned to Fiji in September 2006 for a workshop to refine the DMA system and to help my Master's student analyze data from her coral harvest research. The Internet has made it possible for me to also give assistance when I'm at home (now Nevada).

I've made a deal with myself: as long as I can be useful, I'll buy my return to Fiji annually and assist the work of IAS and LMMA. It's too rewarding an opportunity to pass up.

EAST CAROLINA UNIVERSITY STUDENT SUBUNIT OF THE AMERICAN FISHERIES SOCIETY WINS BEST STUDENT ORGANIZATION OF THE YEAR AWARD.

Roger Rulifson, Eastern Carolina University, rulifsonr@ecu.edu

For the second year in a row, the East Carolina University Student Subunit of the American Fisheries Society (ECU-AFS) has been awarded the Student Organization of the Year on the ECU campus for the 2006-07 academic year. The ECU-AFS organization this year was led by Rebecca (Becky) Deehr, a PhD student in the Coastal Resources Management program. Currently there are 25 undergraduate and graduate students participating in the organization.

This honor is no easy feat as the competition involves over 280 student organizations, some of which are service-oriented. The award is presented to the organization that demonstrates service and leadership to the university and makes a significant contribution through consistent and sustained activities that benefit the community. This year, for the first time, the organizations' faculty advisor, Dr. Roger Rulifson (Biology, Institute for Coastal and Marine Resources) was named as the Advisor of the Year for the 2006-07 academic year. Dr. Rulifson has successfully advised and served ECU-AFS since its inception in 1998, participating in many service events, bringing in exciting speakers and motivating members to be successful.

Achievement Awards are not new to these 25 student members of ECU-AFS. In addition to winning this prestigious award last academic year, the ECU-AFS organization won the Best Student Subunit Award two years in a row from the Southern Division of the American Fisheries Society, and in the fall of 2006 won the AFS Parent Society's Best Student Subunit Award, which was presented to Becky Deehr and ECU-AFS representatives at the international AFS meeting in Lake Placid, New York.

For more information about the ECU Student Subunit, check out their website at www.ecu.edu/org/afs.



Presentation of best Student Subunit of the Year award by the AFS Parent Society at Lake Placid, 2006. L-R: Roger Rulifson (ECU-AFS faculty advisor), Kelly Register (ECU-AFS Co-President), Bob Curry (AFS Southern Division president), Becky Deehr (ECU-AFS Co-President), Chris Kohler (AFS Parent Society President), Jennifer Woodroffe (ECU-AFS President for 2007-08), and Kate Kleber (ECU-AFS member).



(Left) ECU-AFS service project at the Food Bank bagging potatoes. We bagged 2200 pounds this day.
(Right) ECU-AFS organizes the annual Big Sweep of Greenmill Run for the campus.

LARGEST BONY FISH

Steve Lochmann, University of Arkansas at Pine Bluff, slochmann@uaex.edu

Some time ago, I issued an invitation to play a game with the Education Section of AFS. I posed the question, “What is the largest bony fish known to science?” Hey, we’re fish squeezers, we’re supposed to know this sort of stuff, right?

A gut reaction for some was to suggest the whale shark *Rhincodon typus*. This could have been reinforced by the April 2006 cover story from Natural History entitled, “The Biggest Fish, Unraveling the Mysteries of the Whale Shark” (Wilson 2006). Chen et al. (1999) reported that *R. typus* can reach a maximum length of 20 m and a maximum weight of approximately 34,000 kg, but this is not the correct answer to our question. Sharks after all, are cartilaginous, not bony fishes.

Two species, *Arapaima gigas* from the Amazon and *Pangasius gigas* from the Mekong would be good guesses. They are *gigantic* by most standards. However, these two are both shorter than the oarfish *Regalecus glesne* at approximately 11 m (Eschmeyer et al. 1983) and lighter than the ocean sunfish *Mola mola* at approximately 2300 kg (Novak 1982). So what is the answer?

I hope you consider this a *thought* question, rather than a *trick* question. A clue to the answer is the phrase “known to science.” Fossilized remains of *Leedsichthys problematicus* were excavated from a clay pit in Peterborough, England beginning in June 2002. This Middle Jurassic species from the family Pachycormidae was first estimated to have grown to more than 20 m (Martill 1986). Jeff Liston, dig leader for the excavation, conservatively estimates the size of the newest specimen to be approximately 15 meters. This estimate is based on morphometric ratios, and the newly hooded Dr. Liston points out that such an estimate does not really indicate the maximum size to which *L. problematicus* could have grown. Regardless of the exact length, it seems clear that *Leedsichthys problematicus* is the largest bony fish known to science. Congratulations to those who knew the answer or took the trouble to find it!

The Education Section of the American Fisheries Society strives to improve the quality of education for fisheries students and scientists and to promote exchange of education information, techniques, and materials among educators and among educational institutions. The Section also recognizes the importance of continuing education and professional development. If you embrace these goals, perhaps you should consider becoming a part of the Education Section.

References

- Chen, C.T. , K.W. Liu, and S.J. Young. 1999. Preliminary report on Taiwan's whale shark fishery. Pages 162-167 in S.L. Fowler, T. Reid, and F.A. Dipper, editors. Elasmobranch biodiversity, conservation and management. Proceedings of the International Seminar and Workshop in Sabah, Malaysia. IUCN, Gland, Switzerland.
- Eschmeyer, W.N., E.S. Herald, and H. Hammann. 1983. A field guide to Pacific coast fishes of North America. Houghton Mifflin Company, Boston, Massachusetts.
- Martill, D. M. 1986. The world's largest fish. *Geology Today* 2:61–63.
- Novak, J. 1982. Comparison of two different methods of growth values computation illustrated on rudd scales (Pisces: Cyprinidae). *Vestnik Ceskoslovenska Spolecnost Zoologicka* 46:25-32.

Wilson, S.G. 2006. The Biggest Fish, Unraveling the mysteries of the whale shark. *Natural History* 2006(4):42-47.

EDITOR'S NOTE

The newsletter should have arrived in an HTML format if you have that option available in your email program. We hope that the formatting and pictures arrived to your computer the same way we sent them, but there is sometimes no telling what goes on in the inter[net]-galactic space between computers and servers. We have attempted to keep the embedded pictures from becoming attachments while sending the newsletter. However, they sometimes just seem to show up. Please let us know if this has happened to you.

We welcome any suggestions to format, content, or any other issues regarding the newsletter. Newsletter submissions are always welcome; just send them to one of us.

Newsletter co-editors,

Dan Dauwalter, ddauwalt@uwyo.edu

Rebecca Zeiber, rebecca.zeiber@unh.edu