New York Chapter American Fisheries Society – Newsletter

Summer 2009

New York Chapter Officers
2009-2010
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President's Corner

Our newsletter editor, Emily Zollweg, tells me another deadline has come and gone for this newsletter's message from the President. Last time, I followed a strategy of taking a fair amount of time to say very little, and with the field season in full swing and time in the office a precious commodity, I see no reason to change that strategy now. Field season for many of us is time outdoors when we are reminded of why we got into this profession in the first place, interspersed with disheartening checks of our emails where we are reminded that not everyone is on the same page we're on (or even reading the same book), and as often as not those people have some sort of control over our careers. Here in the land of Ivy, we have just bid our summer undergraduate interns a tearful goodbye, after a rewarding summer of enjoying the company of the next generation, who for the most part still exhibit enthusiasm with much greater frequency than cynicism. It is always nice to let them remind us that there is still a lot of fun to be had out there. This year, two of my interns and myself watched in mute amazement as we learned through a radio telemetry study of bowfin (one of my more eccentric endeavors) that as with so many species, bowfin have not been keeping up with the scientific literature, which indicates they are sedentary and seek secluded areas in shallow coves. Many of them seemed quite at peace moving freely back and forth across Oneida Lake on a regular basis and occupying offshore shoals. The one finding that was more or less consistent with scientific models was that dead fish tended not to move much at all. Live and learn. In the spirit of blocking out pesky realities and taking some time to try and feel good about the world, the 2010 Annual Meeting of our Chapter will center around the theme of Heritage, and will hopefully give us a chance to remind ourselves of the special resources we work with here in New York. And hopefully we'll hear some success stories as well. No one can deny we confront big challenges, and most of us will fess up to a boo boo or twelve – but let's not lose sight of the fact that we have accomplished a lot in New York. Every now and then it's worth recharging ourselves with a warm and fuzzy meeting theme, the problems will wait patiently for us to come back to earth. Rob Fiorentino, Casey Festa and Scott Jones have been working diligently to arrange for the meeting – look for announcements in this newsletter. We all hope with this advance warning you can add Lake George into your plans for February 10-12 – if enough of you promise to come, I'll present the early results of our little bowfin study: "Bowfin: I'll Move If I Want To." If that's not adequate enticement, keep an eye out for announcements of student travel awards – we'd really like to see students start to dominate the proceedings. If my presidency teaches us anything at all, it should be that the sooner the next generation takes over, the better.

On a larger stage, the Parent Organization has asked officers to make sure all members are aware of the National Fish Habitat Conservation Act, which has been introduced to the House this year. Times such as these have always been hard on environmental causes, and letting your representatives know how you feel about this Act is time honored tradition. For background information and ways to make your voice heard, refer to:

http://fishhabitat.org/index.php?option=com_content&view=article&id=213:national-fish-habitat-conservation-act-toolkit&catid=36:news&Itemid=50

Randy Jackson, President
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Chapter News

New York Chapter American Fisheries Society
Annual Meeting
First Call for Papers
February 10th-12th, 2010
Lake George, NY

New York's Fisheries Heritage

As professionals dedicated to the conservation and management of New York's aquatic resources, we are constantly confronted with new challenges and threats to our fish and fisheries. Our Annual Meetings provide opportunities to focus on emerging problems and learn of new ones on the horizon. But bad news is all around these days, and the Program Committee thinks our members might be ready for a meeting that serves as a respite from the stress of our day to day lives. New York State possesses an incredible diversity of aquatic habitats, which support a diverse fish fauna and sustain quality fisheries for a wide variety of species. The 2010 Annual Meeting theme will focus on the rich heritage of our State's resources and the accomplishments of those who work to conserve and manage them. This year we will take the time to examine the heritage of our native fishes, the diversity of their communities and the roots of recreational and commercial anglers. We will also explore the history of those professionals who serve, support and protect the fisheries resources of New York State.

We are also exited to announce our keynote speaker Dr. Robert A. Daniels, Curator of Ichthyology at the New York State Museum and Assistant Director of Research and Collections. He received an AB in Zoology from UCLA and a MS and PhD in Ecology at UC, Davis. Dr. Daniels' research deals with fish-habitat relationships and fish zoogeography and distribution. He is particularly interested in the ecology of endangered species. He also monitors changes in the distribution of crayfishes in New York. Dr. Daniels and others are already planning their presentations for this year's meeting. With such an interesting and broad topic we're planning a line up of New York's best fisheries professionals to share their knowledge and experience.

If you would like to speak on this or another topic or wish to present a poster please contact Casey Festa at 518-402-8898 or cafesta@gw.dec.state.ny.us.

Venue & Events

This year's meeting will be here before you know it! The event will be held February 10-12, 2010 at the Fort William Henry Resort and Conference Center in the beautiful and historic Village of Lake George, NY. The Resort has agreed to allow attendees to carry over our special hotel room rate if they wish to stay Friday and/or Saturday. If you haven't visited Lake George in the past I can tell you the winter is the best time of year to visit and this is a great opportunity. We hope you'll hanging around for ice fishing on Lake George Friday afternoon. The Lake George Winter Carnival takes place every weekend during the month of February so it's another great reason to stick around after the meeting and enjoy all Lake George has to offer.

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Website

Our URL address is: http://www.newyorkafs.org/ Newsletters are posted to the website (http://www.newyorkafs.org/newsletters.htm) and archived with previous editions. Scott Jones and I have worked to add all NYCAFS members for whom we have email addresses to the newsletter email notification list. This list is used for the notification of posting of new newsletters and important announcements from the executive committee. If you are not on this list, please email me at snyderw@morrisville.edu . Our goal is to have only electronic distribution, resulting in significant savings to our chapter. As always, if you are having any difficulty with the website or in downloading the newsletters, drop me a line at snyderw@morrisville.edu.

Bill Snyder

New Members

Free Fish CD and Book! Annual chapter dues are only $10 ($5 for students). The first 50 new chapter members (not a member for at least 5 preceding years) receive a free copy of the NYCAFS's CD *Historic Distribution of Inland Fishes of NYS: Map Series by E. C. Raney*, which provides the New York distribution of 131 freshwater fish species. In addition, the first 20 members of the Chapter who become new members in the parent organization American Fisheries Society in 2008 will receive a free copy of the *Guidelines for the Use of Fishes in Research.*

Scott Jones, Sec./Treas.
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Announcements

For Immediate Release
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Picture and interview are available.

S. F. Snieszko Distinguished Service Award Presented to Cornell University Professor

Dr. Paul Bowser, professor of aquatic animal medicine at the College of Veterinary Medicine, was presented with the S.F. Snieszko Distinguished Service Award during the 50th annual Western Fish Disease Workshop and American Fisheries Society (AFS) Fish Health Section Annual Meeting in Utah earlier this month.

"Paul has served in the highest offices and many other committees of the Fish Health Section," said Dr. Ronald P. Hedrick, professor at the University of California, Davis. "He is a major player in fish health nationally and internationally and continues in that capacity as a leader in major disease issues in the northeast."

The S.F. Snieszko Distinguished Service Award is the highest award from the AFS Fish Health

Section and is a career achievement award for service and contributions to the field of aquatic animal health. The award was named after the late Dr. Stanislaus F. Snieszko, the founding director of the Eastern Fish Disease Laboratory. Snieszko, whose career extended from the early 1930s to 1984, is credited with bringing fish health – both nationally and internationally – into the era of modern medical science.

Bowser coordinates the activities of the Aquatic Animal Health Program at Cornell's College of Veterinary Medicine and also serves as the associate director of the AQUAVET Program, a joint educational program in aquatic veterinary medicine that is sponsored by the School of Veterinary Medicine at the University of Pennsylvania and the College of Veterinary Medicine at Cornell University. Prior to joining the faculty at Cornell University, Bowser held faculty positions at the College of Veterinary Medicine at Mississippi State University and at the Bodega Marine Laboratory of the University of California at Davis.

Bowser's research has focused on topics including parasitic, bacterial, and viral diseases of fish; tumor biology in fish; evaluation of new therapeutic compounds in fish; and emerging diseases of fish. Most recently his laboratory group has been heavily involved in the investigation of Viral Hemorrhagic Septicemia that has been found in a wide diversity of fish species in the Great Lakes Basin.

He received his B.S. from Cornell University, his M.S. from Iowa State University and his Ph.D. from Auburn University.

Recent Thesis Abstracts submitted by Lars Rudstam

EFFECTS OF LIGHT ON THE FEEDING INTERACTIONS AND SPATIAL DISTRIBUTIONS OF THE OPOSSUM SHRIMP, *MYSIS RELICTA*, AND THE ALEWIFE, *ALOSA PSEUDOHARENGUS*, IN LAKE ONTARIO
Brent Thomas Boscarino, Ph.D. Cornell University 2009
Advisors Edward Mills and Lars Rudstam

The opossum shrimp, *Mysis relicta*, is a primary predator on zooplankton and both a nutritious prey item for and competitor with planktivorous fish, including the alewife (*Alosa pseudoharengus*), in Lake Ontario. The primary objective of this study is to determine the extent to which spatial overlap and the strength of feeding interactions between mysids and alewife are influenced by the amount of moonlight entering the water column at night. My approach was to study light effects on alewife-mysid feeding dynamics on a variety of different scales – from the absorption of visual pigments in the retina to behavioral experiments in the laboratory to modeling analyses and field distributions in Lake Ontario. A laboratory-based light preference function for adult mysids, in units derived from the spectral sensitivity of the mysid eye, or "mylux" units, was used in combination with an adult mysid temperature preference function to build a model of mysid vertical distribution. This model accurately predicted the vertical distribution of mysids in Lake Ontario on twelve different field sampling occasions between 1995-1996 and 2004-2005. Although laboratory-based temperature and light preferences of juvenile mysids differed from those of adults, the response of adult mysids to temperature and light alone appears to be sufficient to predict mysid vertical distribution across different seasons and moon phases in Lake Ontario. A series of laboratory and field experiments with alewife and *M. relicta* demonstrated that the light levels associated with the upper edge of the mysid distribution on a full moon night were within the range of those used by alewives to enhance their feeding rates on mysids in the laboratory, but not on a new moon

night. Gut content analyses of alewives caught within the mysid layer revealed a greater than 30-fold increase in mysid consumption on the full moon night despite a lower degree of overlap between the two trophic levels, indicating that increased light penetration leads to higher feeding rates of alewives on mysids. These results are significant given that increases in water clarity in Lake Ontario associated with oligotrophication has led to light being more often limiting to mysid distributions than in earlier decades, which, in turn, has led to a better visual foraging environment for alewives. This study is one step towards a better understanding of one of the most central feeding relationships in Lake Ontario and provides insight into how pelagic food web dynamics may be affected by ongoing ecological change.

OVER-WINTER MORTALITY OF GIZZARD SHAD (DOROSOMA CEPEDIANUM) IN ONEIDA LAKE, NEW YORK
Degree of Master of Science by William Warren Fetzer
August 2009
Advisors Lars Rudstam and Randy Jackson

Winter limits resource availability in temperate lakes, exerting a strong influence on the northern distributions of many temperate species by altering the recruitment of age-0 fishes. Recently, there has been growing concern that projected climate change could alter over-winter survival of many fish species and have ecosystem-level effects on all trophic levels of aquatic ecosystems. Oneida Lake has been the focus of a long-term data set across several trophic levels and provides the ideal location to study over-winter mortality in fishes. In Chapter 1, I provide a review of current methods used throughout the literature to address questions involving over-winter mortality in fishes. Specifically, I address methods used, their pros and cons, and what has been learned by the application of each method. Common methods evaluated include experiments, field observations, experiments and field observations, and analysis of long-term data sets. Given that mortality is commonly driven by complex interactions between multiple factors, I suggest researchers use multiple approaches to study fish over-winter mortality. In Chapter 2, I conducted a series of experiments and field sampling to develop a conceptual model of gizzard shad over-winter mortality in Oneida Lake. Gizzard shad exhibited high mortality rates as water temperatures declined prior to ice formation and are highest at temperatures less than 4^{o} C. Habitat sampling demonstrated that shad congregate in high densities in Oneida Lake marinas, which provide a nearshore temperature refuge but may become anoxic during years with consistent ice cover. Within any given year, shad survival is likely a function of length entering winter, rate of temperature decline preceding ice-on, and ice duration.

DIVING BEHAVIOR, PREDATOR-PREY DYNAMICS, AND MANAGEMENT EFFICACY OF DOUBLE-CRESTED CORMORANTS IN NEW YORK STATE
Jeremy T. H. Coleman, Ph.D.
Cornell University 2009
Advisors Milo Richmond and Lars Rudstam
The potential for a rapidly growing double-crested cormorant population to negatively impact fish populations and public resources in North America has focused attention on the feeding ecology and management of this federally protected species. Questions persist regarding the nature of cormorant-fish interactions and the propensity for cormorants to impact fish at the population level. From 1998 to 2003, we conducted research and participated in a management program at Oneida Lake, New York, that incorporated nest control and fall hazing to reduce cormorant populations on the lake. We examined: 1) the behavioral response of cormorants to the management program, 2) cormorant prey selectivity, 3) the impact of varying cormorant

predation pressures on walleye and yellow perch populations, and 4) daily cormorant activity patterns and underwater foraging habits at Oneida Lake compared to other colonies in New York. I used radio telemetry and weekly counts to reveal that fall hazing moved cormorants off of Oneida Lake, reducing the September population annually by approximately 95% of the 1997 level. Most displaced cormorants relocated to nearby Onondaga Lake rather than leaving the region. Diets examined between 1994 and 2003 consisted of 27 different species, but walleye and yellow perch comprised 58-72% by weight annually. I used the relativized electivity index (E^*) to determine that cormorants selected age 1-3 walleye, and age 2-4 yellow perch, with peak selectivity for age-2 walleye and age-3 yellow perch. A comparison of the electivity values revealed that fish girth (max. circumference) is the main determinant of the maximum size of fish that cormorants consume. The cormorant control program resulted in a mean reduction in predation pressure on fish populations of approximately 47% from the 1997 level in 1998-2005, which coincided with an increase in abundance of the adult populations of both walleye and yellow perch. Yellow perch survival increased from age-1 to age-3, and walleye survival increased from age-1 to age-4 during this time of predator reduction. Time-depth recorders deployed on cormorants from Oneida Lake, Lake Ontario, and Lake Champlain reveal differences in depth utilization but no disparity in the total time spent.

Editors' Note

Welcome to the Summer 2009 newsletter! Please enjoy, and feel free to write to me with suggestions for future newsletters! If you would care to submit something for the Winter newsletter, please email it to me at eczollwe@gw.dec.state.ny.us by November 15, 2009.
Emily Zollweg, Newsletter Editor

National AFS

New titles from AFS

Challenges for Diadromous Fishes in a Dynamic Global Environment
Alex Haro, Katherine L. Smith, Roger A. Rulifson, Christine M. Moffitt, Ronald J. Klauda, Michael J. Dadswell, Richard A. Cunjak, John E. Cooper, Kenneth L. Beal, and Trevor S. Avery, editors 943 pages, hardcover
Published by the American Fisheries Society Publication date: August 2009
ISBN: 978-1-934874-08-0 $69.00 list price, $48.00 AFS members
To order: http://www.afsbooks.org/54069c.html

Based on a 2007 international symposium, this book reviews the biology, ecology, human importance, and management and conservation of diadromous fishes with the goal of providing innovative interpretations and opportunities for sustainability. Because diadromous fishes use different environments and migration corridors to complete their life history in ocean and freshwater environments, they are particularly vulnerable to direct and indirect consequences of human development and global climate change.
Also presents new ecological and evolutionary concepts and experimental and modeling tools that advance understanding of the significance and the resilience of the

diadromy life history strategies within ecosystems. Considers creative approaches for habitat protection and restoration to sustain stocks in the future.

Check out the latest issue of "The Northeast Fish Rapper" at
http://www.fisheries.org/units/ned/docs_newsletter.htm

Dylan Weese, Editor
The Northeast Fish Rapper

NED mailing list
NED@lists.fisheries.org
http://lists.fisheries.org/listinfo.cgi/ned-fisheries.org

AFS Information on the Web http://www.fisheries.org

AFS has a mailing list for postings regarding fish, announcements, job opportunities and requests for information. You can subscribe to receive these in normal email mode or in digest mode. To subscribe, e-mail to: daemon@fisheries.org and enter SUBSCRIBE AFS in the body of the e-mail.

Jobs

AFS Job Center Online: http://www.fisheries.org/jobs.shtml http://www.fisheries.org/jobs.shtml

Interesting Stuff

I found this in the newest version of Diet for a Small Lake, NYSFOLA

Fig. 3–1. Invasive species can hitchhike their way to new locations if boats are not thoroughly cleaned before launching. (CREDIT: MARK WILSON)

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