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AIC 2011

ATLANTIC INTERNATIONAL CHAPTER OF THE AMERICAN FISHERIES SOCIETY

President's message

by Jud Kratzer
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Greetings AIC members! Here in Vermont, we enjoyed a relatively mild winter, and I assume it was similarly mild for the rest of the AIC region. I know it has not been the best of conditions for Vermont's skiers and snowmobilers, but it sure does make travelling across frozen lakes for creel surveys and fishing a lot easier. I'll take it!

As many of you know, I was not able to attend the 2011 AIC meeting near Québec City, but I had a good reason...my second child was born two days before the meeting! I've been informed that it was a great meeting. Thanks to Arianne Massé and Véronique Leclerc for a great job as the local arrangements committee, and thanks to all the presenters that provided a full, informative, and interesting technical program. Christine Lipsky graduated, with flying colors, to the past-president role. Graham Goulette of NOAA Fisheries in Maine was elected vice president, and John Magee, our stalwart Secretary/Treasurer, graciously agreed to continue in that role.

The Executive Committee is already planning the 2012 meeting for right here in Vermont. The meeting is scheduled for September 23 to 25 at Quimby Country in Vermont's majestic Northeast Kingdom. The venue, which is less than two miles from the Quebec border and only about seven miles from the New Hampshire border, is an old fashioned fishing lodge right on the shores of Forest Lake (really just a pond). Check out the website at quimbycountry.com for more information. As always, the AIC will provide financial travel assistance to a limited number of students that give oral presentations at the meeting. Students can contact Christine Lipsky (christine.lipsky@noaa.org) for more information.

Other AFS meetings outside of the AIC region include the 2012 AFS Northeast Division meeting, which is scheduled for April 15-17 in Charleston, WV and the parent society meeting, which is scheduled for August 19-23 in Minneapolis-St. Paul, MN. The focus of the Minnesota meeting is Fisheries Networks: Building Ecological, Social, and Professional relationships. How appropriate. In my experience, one of the best ways to build professional relationships is to attend an AFS meeting, whether at the chapter, division, or national level. Hopefully, I'll be able to network with more of you at one of this year's meetings, as my wife is not planning to have any more babies this year!

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Upcoming events & meetings in fisheries sciences

38TH ANNUAL MEETING OF THE ATLANTIC INTERNATIONAL CHAPTER OF THE AMERICAN FISHERIES SOCIETY

September 23-25, 2012
Quimby Country Lodge and Cottages
Averill, Vermont

Please join us for the 38th annual meeting of the Atlantic International Chapter in Vermont's majestic Northeast Kingdom. We're sure you will enjoy connecting with other fisheries professionals from eastern Canada and northern New England while learning of the region's latest fisheries research and enjoying the ambience of an historic fishing lodge

2012 AIC Conference Registration
http://www.fisheriessociety.org/aic/conference-registration.html

142ND ANNUAL MEETING OF THE AMERICAN FISHERIES SOCIETY

August 19 – 23, 2012
Minneapolis – St. Paul, MN
http://www.fisheries.org/afs2011/

SPECIES ID AND ASSESSMENT OF NORTHEASTERN FRESHWATER FISH ASSEMBLAGES

with David B. Halliwell and Richard Langdon (See tare sheet next page)
June 10-16, 2012
Information on lodging options, meals, and costs may be found at http://www.eaglehill.us/programs/general/application-info.shtml
There is an online application form at
http://www.eaglehill.us/programs/general/application-web.shtml

FISH PASSAGE 2012

The 2012 National Conference on Engineering & Ecohydrology for Fish Passage
June 5-7, 2012
University of Massachusetts, Amherst
http://fishpassage.ecs.umass.edu/Conference2012/

Natural History Field Seminars, Workshops, and Courses at Eagle Hill on the Eastern Maine Coast

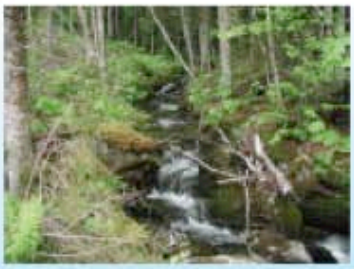
Species ID and Assessment of Northeastern Freshwater Fish Assemblages

June 10 – June 16, 2012

Freshwater fish in the northeastern United States number over 150 species, inclusive of native and introduced forms, resident to ponded and flowing waters of varying habitats and water quality. Sportfish species (trout, salmon, bass, pike and perch) are most recognizable, while many of the vast minnow (one-third of the fish fauna) and non-game species are more difficult to identify, particularly in the field. This seminar will focus on the taxonomy and field/laboratory identification of 28 freshwater fish families, inclusive of diadromous (migratory) species. Through lectures, actual field sampling (minnow trapping, beach seining, and backpack electrofishing), examination of fresh and preserved-aquarium specimens, and use of technical keys, participants will gain an understanding of the taxonomy, morphology, and ecology of freshwater fish. Fish origins, distributions, and conservation status will be emphasized and development of Indices of Biotic Integrity (IBI) and the Biological Condition Gradient (BCG) reviewed. There will also be an introduction to pre-Columbian fish remains found at Maine archaeological sites, and a listing of historical and current scientific literature will be provided. This seminar will be of great interest to aquatic-wildlife-conservation biologists-scientists, environmental consultants, natural historians, and others who wish to learn more about freshwater fish and resident fish species assemblages.

Dave Halliwell (david.halliwell@maine.gov) is a certified AFS Fisheries Professional with a Ph.D. in Fishery Biology from the University of Massachusetts, Amherst, specializing in fish conservation, aquatic habitat classification, and vertebrate taxonomy. He has been employed as an Aquatic Biologist with Maine DEP (Augusta) since 1999. Dave has spent over three decades identifying and investigating the habitats of freshwater fishes while working with northeastern State and Federal fish and water quality agencies and has considerable experience teaching University and field courses related to New England fish and wildlife. Related interests include pre-European indigenous fish (archaeological) studies, aquatic habitat restoration, hydropower-flow issues, reservoir water levels, lake water quality assessment, and fish zoogeographic studies. Dr. Halliwell is a co-author of the *Inland Fishes of Massachusetts* (2002).

Rich Langdon (rich.langdon@state.vt.us) has a M.S. in Fisheries Science from Humboldt State University, CA and will co-instruct this seminar in 2012. Rich also provides over two decades of experience as an aquatic biologist with the Vermont DEC (Waterbury Lab), specializing in the study of resident fish assemblages in running waters. He has developed modifications for the Index of Biotic Integrity and Biological Condition Gradient analysis of New England wadeable streams. His research interests include the classification of running water fish assemblages and post-glacial fish distribution patterns. Rich is co-author of *Fishes of Vermont* (2006).



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Inaugural Year of Walleye Culture at Ed Weed Fish Culture Station Grand Isle Vermont

by Kevin Kelsey & Tom Chairvolotti

Vermont Fish & Wildlife Department

The potential risk of VHS arriving in Lake Champlain in the future has led to a basin management approach for fisheries programs in the state of Vermont. The Vermont Department of Fish and Wildlife's Ed Weed Fish Culture Station is located in Grand Isle in Lake Champlain, drawing lake water as a source to rear trout, salmon and now walleye for the Champlain basin. Two recirculation units were constructed on site by hatchery staff in the winter of 2011, with the help and guidance of staff from Bald Hill Fish Culture Station.

Walleye program initiatives consisted of stocking Phase I unfed fry, advanced fry (less than 1") and fingerlings (1.5-2.0"). In addition, advance fry were reared to seed in cooperative ponds managed by the Lake Champlain Walleye Association (LCWA) for producing fingerlings. All efforts were for distribution into the Champlain basin. With some construction still in progress, the fry were introduced to the systems. Program objectives were met for fry and advanced fry with a combined total of 554,800 distributed to the lake. Advanced fry were fed brine shrimp and reared in a recirculation system for 7 days and sent to the LCWA ponds. These ponds produced a combined 55,200 fingerlings. An additional 20,100 fingerlings were reared from hatch exclusively on a dry diet in the other recirculation system.

Our initial attempt with recirculation technology and formulated feed was recognized as worthy of presentation at a walleye symposium during the 72nd Northwest Fish and Wildlife Conference moderated by Alan Johnson Iowa DNR and Bob Summerfelt University of Iowa. A special thanks to LCWA for sponsorship to attend the conference.

Walleye culture systems for advanced fry and fingerling culture, Ed Weed Fish Culture Station, Grand Isle, Vermont.

Merrimack River Salmon Restoration: A Shift in Strategy

By Matthew Carpenter
Fisheries Biologist
NH Fish and Game Department

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It has been 35 years since the first salmon fry were released in the Merrimack River watershed under the current Atlantic salmon restoration program, which is funded by the federal Sport Fish Restoration Program. Before 1976, Atlantic salmon had been missing from the waters of the Merrimack since the first attempt at salmon restoration ended in 1895. The original salmon population was extirpated by dams built in Lawrence and Lowell in the early 1800s.

Optimism ran high in the early days of the program. Targets for adult salmon returns were set in the thousands. The program became a catalyst for habitat restoration, land conservation and fish passage projects throughout the Merrimack watershed, but the goal of achieving a sustainable salmon run has remained elusive. An average 121 adult salmon return to the Merrimack River each year.

A minimum number of 300 salmon was set as the threshold for holding salmon at the Nashua National Fish Hatchery. That is, the first 300 returning fish are held at the hatchery, where their eggs are used to produce the millions of juvenile salmon that are stocked throughout the Merrimack River watershed each year. Until 2011, this target was only exceeded once, with 331 salmon returns counted in 1991.

TROUBLE AT SEA

Salmon populations throughout North America are in decline, despite the closing of an ocean fishery off the western coast of Greenland, where Atlantic salmon congregate before migrating back to their home rivers. Poor survival in the ocean has been a major obstacle to salmon restoration efforts throughout the region. Determining the potential cause, or causes, is a major focus of current research. If ocean survival is cyclical, then it is reasonable to believe that salmon restoration can succeed. However, if there has been a fundamental shift in the North Atlantic ecosystem, because of a changing climate or other factors, then salmon restoration may not be possible.

It was with this uncertainty about the marine phase of the salmon's life cycle in mind that the Merrimack River Technical Committee began, in 2010, to rethink the strategy of the Merrimack River Salmon Program. A common theme in the discussion has been scaling back and shifting focus toward evaluating the potential for natural salmon reproduction in the watershed, especially in the Souhegan River, where a recent dam removal has made salmon spawning habitat accessible for the first time in the history of the program. Releasing adult salmon and evaluating their ability to spawn in the wild, rather than waiting until we reach a minimum target of 300 fish, will tell us whether the Souhegan River contains habitat that is capable of supporting a sustainable salmon population if marine survival improves.

RECORD RETURNS

Ironically, marine survival did improve, at least for salmon returning in 2011. A record number of 402 Atlantic salmon were counted at the Essex Dam fish lift last spring. Similar increases were recorded on salmon rivers throughout Maine and Canada. The increase in numbers allowed us to take some big steps toward answering questions about natural reproduction. Adult salmon were released into the Souhegan, Baker and upper Pemigewasset rivers. Successful spawning was confirmed by monitoring radio-tagged fish and counting redds.

In two years, we will be able to sample for salmon parr, in areas where successful spawning was recorded. This will allow us to measure the reproductive success of salmon that spawned naturally in the watershed. Within five years, we should have a better understanding of what to expect from salmon that are allowed to run the river. This information, along with trends in ocean survival, will ultimately determine if successful salmon restoration can be achieved for the Merrimack.

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Peter Cronin retires from the New Brunswick DNR after 37+ years of service

On January 31st, 2012 Peter Cronin retired after 37+ years of service to the New Brunswick Department of Natural Resources. Peter worked for many years as a Regional Biologist before becoming the Manager of NB's Fisheries Program in 1996. Peter joined the American Fisheries Society - Atlantic International Chapter in 1976. He is well known to the AIC membership, having given Joan a run for her money on "most consecutive meetings attended." Peter's service to the AFS-AIC includes being a Past-President AIC; member of Parent Society Nominating Committee; Co-Chair, Cold water management workshop for lake trout; Committee member, Warm water workshop for black bass in northern waters; and he chaired, moderated and presented papers at numerous gatherings. Peter's well deserved retirement plans include some travel; some fishing and some quality time with his family and Anne at his camp on the Tobique river.

American Fisheries Socieity – Atlantic International Chapter, 1979 Executive Committee. [believed to be] from left: Peter Cronin, Peter Bourque, Al Knight, John Ritter.

Peter Cronin with wife Anne at Peter's retirement party.