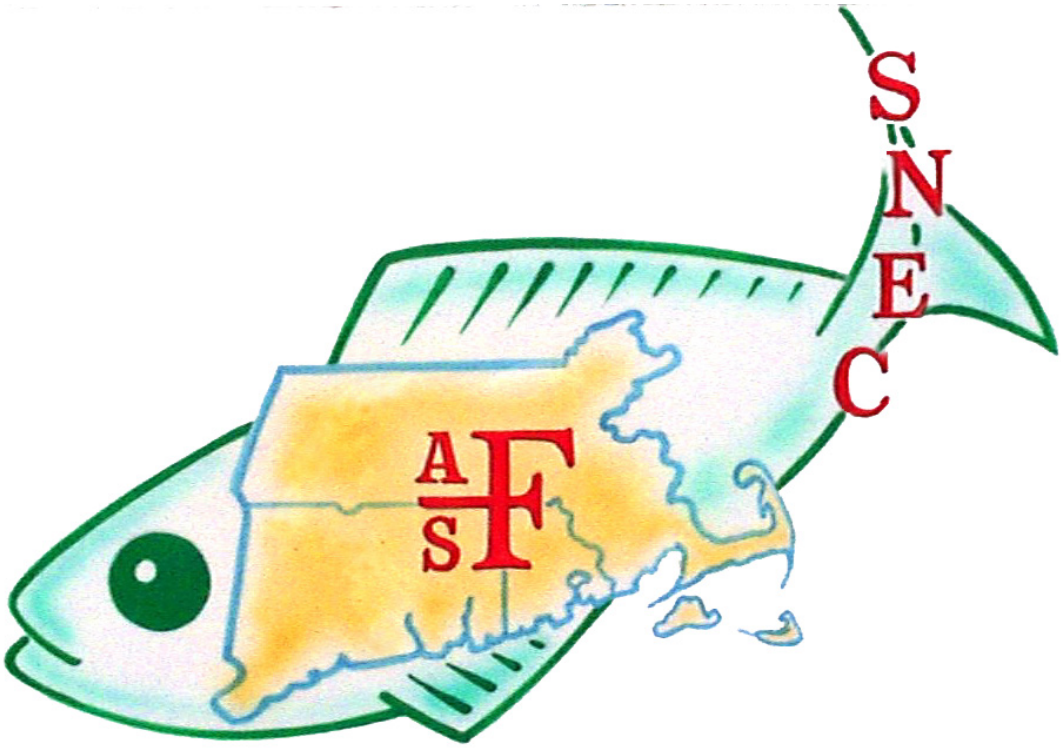
2014 Summer Science Meeting



Southern New England Chapter

American Fisheries Society

June 18, 2014

Wilfred B. Young Building

University of Connecticut

Storrs, CT

Program

8:20 – 8:45	***Registration and Coffee***
8:45 – 9:00	**Opening comments** Syma Ebbin, SNEC President John Volin, Chair, Department of Natural Resources and the Environment, University of Connecticut
9:00 – 9:20	**Catfish: An active part of our sport fish management program in Connecticut** Hagstrom, Neal and Justin P. Davis, *Connecticut Department of Energy and Environmental Protection, Inland Fisheries Division, 209 Hebron Rd., Marlborough, CT 06447*
9:20 – 9:40	**Community Fishing Waters Program: You're stocking where?** Beauchene, Mike, *Connecticut Department of Energy and Environmental Protection, Hartford, CT 06106*
9:40 – 10:00	**Marine ornamental aquaculture in the Northeast U.S.: The state of the industry in 2013** Morcom, Sarah[1], Robert S. Pomeroy[2], and Paul A. Anderson[1], *[1]Mystic Aquarium, a division of Sea Research Foundation, Inc., Mystic, CT 06355; [2]Connecticut Sea Grant College Program, University of Connecticut at Avery Point, Groton, CT 06355*
10:00 – 10:20	***Break***
10:20 – 10:40	**Methods comparison for back-calculating length-at-age of net-pen raised Atlantic Salmon in the Gulf of Maine** Haas-Castro, Ruth[1], Tim Sheehan[1], Zachary Means[2], *[1]NOAA Fisheries, 166 Water Street, Woods Hole, MA 02543; [2]Eckerd College, Department of Biology, St. Petersburg, FL 33711*

10:40 – 11:00 **Monitoring the American Eel glass eel and elver migration on the Lower Mill Brook, Old Lyme Connecticut**
Tripp, James M., Sandra Millán-Tripp, and Scot Tripp, *Tributary Mill Conservancy, Inc. 3 Mill Lane, Old Lyme CT 06371*

11:00 – 11:20 **Can natural tags be used to distinguish river herring natal origin at different spatial scales?**
Turner, Sara M., *SUNY College of Environmental Science and Forestry, Syracuse, NY 13210*

11:20 – 11:40 **Biodiversity and trophic structure of the cephalopod community of the Bear Seamount**
Staudinger, Michelle[1], Valerie Hartigan[2], Mike Vecchionne[3,4], and Christine France[4], *[1]Northeast Climate Science Center, University of Massachusetts Amherst, Amherst, MA 01003; [2]Coastal Carolina University, Conway, SC 29526; [3]NMFS National Systematics Laboratory, Washington, DC 20013; [4]National Museum of Natural History, Smithsonian Institution, Washington, DC 20013*

11:40 – 12:00 **Frequency-dependent mate selection in *Poecilia reticulata***
Porter, Andre N. and Jack S. Frankel, *Howard University, Washington, DC 20059*

12:00 – 12:40 ***Awards and Business Meeting***

12:40 – 1:40 ***Lunch***

1:40 – 2:40 **Joining words to the world: How and why we name things in nature (Keynote)**
Prosek, James, *Easton, CT*

2:40 – 3:00 **Landscape-level predictors of localized extirpation in Bridle Shiner (*Notropis bifrenatus*)***

Pregler, Kasey C.[1], Neal Hagstrom[2], Jason Vokoun[3], and Eric T. Schultz[1], *[1]University of Connecticut, Department of Ecology & Evolutionary Biology, Storrs, CT 06269-3043; [2]Connecticut Department of Energy & Environmental Protection, Inland Fisheries Division, 209 Hebron Rd., Marlborough, CT 06447; [3]University of Connecticut, Wildlife and Fisheries Conservation Center, Department of Natural Resources and the Environment, Storrs, CT 06269-2840*

3:00 – 3:20 **Streamscape genetic structure of Bridle Shiner, an imperiled minnow***

Hessenauer, Jan-Michael[1], Kasey Pregler[2], Jason Vokoun[1], and Eric Schultz[2], *[1]University of Connecticut, Wildlife and Fisheries Conservation Center, Department of Natural Resources and the Environment, Storrs, CT 06269-2840; [2]University of Connecticut, Department of Ecology and Evolutionary Biology, Storrs CT, 06269-3043*

3:20 – 3:45 ***Break***

3:45 – 4:05 **The physiological effects of catch and release angling on *Paralichthys dentatus* in Long Island Sound***

Vogt, Patrick R. and John T. Kelly, *University of New Haven, Department of Biology and Environmental Science, 300 Boston Post Road, West Haven, CT 06516*

4:05 – 4:25 **Fishing for Food: Evaluating Subsistence Harvesting of Coastal Resources in Connecticut***

Marcks, Sydney, Syma Ebbin, Ashley Hogan, William Kima, Heather Krassler, Corey Leamy, Tiffany Rich, Nicole Stanley, Ronald Tardiff, Ashley Tougas, and Edward Waido, *University of Connecticut, Sea Grant College, Groton CT 06340*

4:25 – 4:45 **A cautionary tale: Evaluating an environmentally-explicit stock recruit model for Gulf of Maine Atlantic Cod (*Gadus morhua*)**

Hare, Jon[1], Liz Brooks[2], Mike Palmer[2], and Jim Churchill[3], *[1]NOAA NMFS, Narragansett, RI 02882; [2]NOAA NMFS Woods Hole, MA 02543; [3]Woods Hole Oceanographic Institution, Woods Hole, MA 02543*

* Denotes student paper

Abstracts

Community Fishing Waters Program: You're stocking where? Beauchene, Mike, *Connecticut Department of Energy and Environmental Protection, Inland Fisheries Division, Hartford, CT 06106;* mike.beauchene@ct.gov

Participation in recreational fishing has been on a steep decline since a peak in the early 1990's. Fisheries biologists who manage recreational fisheries should be concerned on many levels. Synergistic effects of the loss of revenue from fishing license sales, decrease in the number of engaged constituents, and disconnects in the generational passing of the fishing tradition, could further reduce support for sport fish programs in this era of lean government spending. As of 2011, the Inland Fisheries Division (IFD) has made angler recruitment, retention, and recapture the number one priority. Our goal is to increase participation in fishing 30%, 52,000 more participants, in the five year window of 2011-2016. This presentation will highlight the expansion of the Community Fishing Waters (CFW) program, one of several key strategies we are currently implementing to recruit, retain, and recapture anglers, ultimately increasing angler participation.

Methods comparison for back-calculating length-at-age of net-pen raised Atlantic Salmon in the Gulf of Maine. Haas-Castro, Ruth[1], Tim Sheehan[1], Zachary Means[2], *[1]NOAA Fisheries, 166 Water Street, Woods Hole, MA 02543; [2]Eckerd College, Department of Biology, St. Petersburg, FL 33711;* ruth.haas-castro@noaa.gov

Common techniques for back-calculating length-at-age of Atlantic salmon, Dahl-Lea and Fraser –Lee, were compared to determine the better method for estimating the size of individual salmon post-smolts from adult salmon scales. The Fraser Lee method was further tested by comparing results using a standard biological intercept to those using a regression intercept. Atlantic salmon smolts were reared in commercial net pens located in the Gulf of Maine from June 1998 to July 2000 as part of a cooperative restoration effort. During twenty-four sampling events, weight, length, and scale samples were collected, and each specimen received a unique tag. Of over 2000 fish sampled, 45 had paired scale samples, with one sample collected just after release into the net pens, and the second sample collected at the conclusion of the study, a period of two years growth. Using a computer image analysis system, post-smolt and adult scales were imaged, and scale radius measurements and distances from scale focus to the freshwater annulus were obtained. Methods of back-calculation approximated the average observed lengths of the post-smolts. Lengths predicted by the Fraser-Lee method generally varied less from observed lengths than those predicted by the Dahl-Lea method, and the use of a standard biological intercept value of 25 mm produced fish length values closer to measured values than the use of the regression intercept value. This study indicates that use of the Fraser-Lee method of back-calculating length-at-age for Atlantic salmon may provide better estimations of smolt length than the Dahl-Lea method, and that the use of a standard biological intercept may further increase accuracy.

Channel Catfish: A new sportfish management program in Connecticut. Hagstrom, Neal and Justin P. Davis, *Connecticut Department of Energy and Environmental Protection, Inland Fisheries Division, 209 Hebron Rd., Marlborough, CT 06447*; neal.hagstrom@ct.gov.

In an effort to add diversity to the recreational fishing landscape, the Connecticut Department of Energy and Environmental Protection Inland Fisheries Division (IFD) began stocking Channel Catfish at several locations statewide in 2007. Channel Catfish are an attractive option for the creation of new fisheries because they are readily caught by shore anglers, can thrive in urban water bodies where IFD has not historically engaged in active fisheries management, can grow to large sizes, and are a popular food fish. IFD stocked large (35-40 cm) catfish at a group of small "Community Ponds" in urban centers to create "put and take" fisheries, and also stocked several "put-and-grow" lakes with smaller (23-30 cm) catfish that would presumably grow to desirable sizes within a few years. Initial assessments of these new fisheries are promising. Angler surveys and anecdotal reports indicate that, in particular, the Channel Catfish stockings at Community Ponds have been very well received and are attracting anglers. Netting surveys conducted at two of the "put-and-grow" lakes in 2013 suggest that IFD has successfully created fishable populations of Channel Catfish that contain trophy-sized fish (>60 cm). Given the early successes of this program, IFD decided to expand Channel Catfish stockings to new locations in 2012 and 2014, and is working to market these new opportunities to Connecticut anglers.

A cautionary tale: Evaluating an environmentally-explicit stock recruit model for Gulf of Maine Atlantic Cod (*Gadus morhua*). Hare, Jon[1], Liz Brooks[2], Mike Palmer[2], and Jim Churchill[3], *[1]NOAA NMFS, Narragansett, RI 02882; [2]NOAA NMFS Woods Hole, MA 02543; [3]Woods Hole Oceanographic Institution, Woods Hole, MA 02543;* jon.hare@noaa.gov

A previous study documented a correlation between Atlantic Cod (*Gadus morhua*) recruitment in the Gulf of Maine and an annual index of the north component of May winds. This correlation was supported by modeling studies that indicated unusually strong recruitment of Gulf of Maine Cod results from high retention of spring-spawned larvae in years when winds were predominately out of the north, which favor down-welling. We re-evaluated this relationship using updated recruitment estimates from a more recent stock assessment and found that the correlation decreased between recruitment and wind. The original relationship was largely driven by two recruitment estimates, one of which (2005 year class) was highly uncertain because it was near the terminal year of the assessment. With additional data, the updated assessment estimated lower recruitment for the 2005 year class, which consequently lowered the correlation between recruitment and wind. These results suggest the need for more caution in the development of environmentally-explicit stock recruitment relationships, in particular when basing relationships and hypotheses on recruitment estimates from the terminal years of stock assessment models. More broadly, this study highlights a number of sources of uncertainty that should be considered when analyses are performed on the output of stock assessment models.

Streamscape genetic structure of Bridle Shiner, an imperiled minnow. Hessenauer, Jan-Michael[1], Kasey Pregler[2], Jason Vokoun[1], and Eric T. Schultz[2], *[1]University of Connecticut, Wildlife and Fisheries Conservation Center, Department of Natural Resources and the Environment, Storrs, CT 06269-2840; [2]University of Connecticut, Department of Ecology and Evolutionary Biology, Storrs CT, 06269-3043;* jan-michael.hessenauer@uconn.edu

Bridle Shiner (*Notropis bifrenatus*) is a freshwater minnow of conservation concern throughout much of its range (southern Canada to South Carolina), which is centered on Northeastern US coastal watersheds. A recent study found limited individual movement among habitat patches within the Shunock River in SE Connecticut, suggesting that the population is distributed as a metapopulation. In the current study, we extensively sampled 20 habitat patches within a 5.5 km stretch of the Shunock River to evaluate whether limited dispersal and anthropogenic barriers (e.g., dams and culverts) resulted in genetic structure of the population. Individuals were genotyped at 8 highly variable microsatellite loci. Genetic structure was estimated using a suite of computer programs and the effects of apparent anthropogenic barriers was estimated. A preliminary analysis revealed genetic structure within the Shunock River watershed. The results of this analysis will elucidate the metapopulation dynamics of Bridle Shiner within the Shunock River watershed and inform the conservation of this species by determining the relative effects of anthropogenic barriers vs. naturally limited dispersal on genetic structure.

Fishing for Food: Evaluating Subsistence Harvesting of Coastal Resources in Connecticut. Marcks, Sydney, Syma Ebbin, Ashley Hogan, William Kima, Heather Krassler, Corey Leamy, Tiffany Rich, Nicole Stanley, Ronald Tardiff, Ashley Tougas, and Edward Waido, *University of Connecticut, Sea Grant College, Groton CT 06340; sydney.marcks@gmail.com*

Subsistence fishing in Connecticut is not well-understood or specifically regulated. In light of the new "Enhanced Opportunity Shore Fishing Program", fisheries managers with the Connecticut Department of Energy and Environmental Protection (CTDEEP) desired more information on subsistence fishing: where fishermen receive their fishing information, awareness of the lower minimum sizes for scup and summer flounder, the definition of subsistence fishing in Connecticut, and where this subsistence fishing is concentrated. To gather this information, the ARE 3437: Marine Fisheries Economics and Policy class formed and shared a survey for marine anglers in Connecticut. In total, 47 surveys were completed. The dissemination of information appears to be largely successful, as nearly all respondents were aware of the fishing regulations, health advisories, and reliable sources of fishing information (mainly the CTDEEP website and signs located at fishing sites). However, only half of respondents were aware of the new Enhanced Opportunity Shore Fishing Program. Respondents largely consume their catch and also share it with others. No individuals sold their catch. Of those who consumed their catch, most consumed at least one meal a month. Despite high levels of consumption by Connecticut harvesters, less than half of respondents had heard of the term "subsistence fishing". Further, many of those surveyed would still fish if there were nothing to catch. Most surveying was conducted in eastern Connecticut and captured little demographic diversity, so an expanded surveying effort would be required in order to properly assess subsistence harvesting of coastal resources in Connecticut.

Marine ornamental aquaculture in the Northeast U.S.: The state of the industry in 2013. Morcom, Sarah[1], Robert S. Pomeroy[2], and Paul A. Anderson[1], *[1]Mystic Aquarium, a division of Sea Research Foundation, Inc., Mystic, CT 06355; [2]University of Connecticut, Connecticut Sea Grant College Program, Groton, CT 06355;* panderson@searesearch.org

The role of marine ornamental aquaculture (MOA) in the marine aquarium trade, and regional contributions to this effort, are poorly understood. The objective of this study was to characterize businesses in the Northeast U.S. that are breeding and/or selling MOA species and assess the economic value of MOA in the region. Five hundred and fifty marine aquarium businesses, education and research institutions in the Northeast U.S. were asked to participate in a survey. Fifty-four percent of the 74 respondents reported retailing MOA livestock sourced elsewhere (retailers), 19% reported conducting their own commercial MOA (commercial), and 9% reported conducting MOA as a part of public aquaria, research, development, and/or educational endeavors (ARD&E). MOA stock accounts for an average of 33% of corals, 18% of marine fishes, and 8% of non-coral invertebrates sold and reported by retailers, despite expressed efforts to source MOA stock. Corals are the most valuable MOA commodity sold by retailers and commercial aquaculturists, generating up to $60K in annual sales for retailers and $100K in annual sales for commercial aquaculturists. MOA fishes generate up to $50K in annual sales for commercial aquaculturists, and MOA non-coral invertebrates generate up to $30K in annual sales for commercial aquaculturists. The combination of market demand, low level of supply, and regional ARD&E institutions represents an opportunity for the growth and development of the commercial MOA industry in the Northeast.

Frequency-dependent mate selection in *Poecilia reticulata.* Porter, Andre N. and Jack S. Frankel, *Department of Biology, Howard University, Washington, DC 20059;* jfrankel@howard.edu

Heterogeneity within a population enhances its long-term survival. A fundamental method of maintaining such population heterogeneity is the retention of rare or uncommon phenotypes by selective mating strategies. Utilizing a frequency-dependent selection mating strategy, females would be expected to exhibit an affinity towards groupings of males comprised of multiple phenotypes, as compared to those showing no phenotypic diversity. Employing two color morphs, red tuxedo and red, of the Guppy (*Poecilia reticulata,* Poeciliidae), this study was designed to investigate whether *P. reticulata* females would preferentially seek out heterogeneous groupings of males exhibiting two color morphs. Adult female Guppies were exposed simultaneously to two groups of males (n = 10); one comprised of only the tuxedo red color morph (n = 5) and the other of the two color morphs (n = 5). For the latter group, the ratio of males exhibiting the two colorations was changed incrementally over multiple trials, beginning and ending with homogeneous populations (5:0, 4:1, 3:2, 2:3, 1:4, 0:5). Courting behaviors and population affinities (i.e. female location relative to the male compartments) were recorded. Females did not exhibit a preference for male groupings exhibiting either the 4:1 or 1:4 color ratios. However, they clearly showed an affinity for the male groupings of 3:2 and 2:3 ($p < .05$).

Landscape-level predictors of localized extirpation in Bridle Shiner (*Notropis bifrenatus*). Pregler, Kasey C.[1], Neal Hagstrom[2], Jason Vokoun[3], and Eric Schultz[1], *[1]University of Connecticut, Department of Ecology & Evolutionary Biology, Storrs, CT 06269-3043; [2]Connecticut Department of Energy & Environmental Protection, Inland Fisheries Division, Marlborough, CT 06447; [3]University of Connecticut, Wildlife and Fisheries Conservation Center, Department of Natural Resources and the Environment, Storrs, CT 06269-2840;* kasey.pregler@uconn.edu

Bridle Shiner (*Notropis bifrenatus*) is apparently declining over most of its range and is currently listed as a species of concern in Connecticut. Recent research indicated the apparent decline of Bridle Shiner in the state was in part due to changes in sampling gear used for statewide surveys. Seining used 50 years ago was demonstrably more effective at capturing bridle shiner than the currently favored and more frequently used electrofishing gear. The present study is a reevaluation of the species distribution in light of this recent finding. We seined at all known historic sites in Connecticut and found that some populations once thought to be extirpated are in fact extant. Nonetheless, Bridle Shiner have a sharply reduced range in Connecticut, in that the number of site occurrences has declined 60% over 50 years. Using geospatial tools we identified landscape-scale habitat measures that were potential predictors of extirpation. We investigated metrics associated with land cover change, such as impervious surfaces, and those indicative of habitat fragmentation and patch isolation using logistic regression, and found support for land cover correlates of decline. Our results provide needed context on declines in this species and potential avenues for conservation actions.

Joining words to the world: How and why we name things in nature (Keynote). Prosek, James, *65 Kachele Street, Easton, CT 06612*

I will talk about how and why we name and order the natural world, including such issues as what the future of taxonomy might look like, what it means to join language to the natural world, and how naming things alters and shapes our perceptions of creatures in nature. I came to this inquiry about names through my love of trout and setting out at an early age to make a book of watercolors of the trout of North America (because I could not find one in the local library). When I began writing letters to prominent salmonid taxonomists I learned very quickly (at the age of twelve) that no two biologists could agree on how many "species" of trout there were, and realized that the whole endeavor of splitting nature into communicable units is not an exact science. I will talk about how I try to work through some of these concepts and themes with my visual art and also about my interest in eels and in general my passion for the physical diversity of life on this planet.

Biodiversity and trophic structure of the cephalopod community of the Bear Seamount. Staudinger, Michelle[1], Valerie Hartigan[2], Mike Vecchionne[3,4], and Christine France[4], *[1]Northeast Climate Science Center, University of Massachusetts Amherst, Amherst, MA 01003; [2]Coastal Carolina University, Conway, SC 29526; [3]NMFS National Systematics Laboratory, Washington, DC 20013; [4]National Museum of Natural History, Smithsonian Institution, Washington, DC 20013;* mstaudinger@usgs.gov
In late August-early September of 2012, a deepwater biodiversity exploration cruise was conducted of the Bear Seamount (39°55'N 67°30'W), part of the New England Seamount Chain. Mid-water and bottom trawls were deployed at 600 – 1,500 meters, and ≥1,000 meters, respectively, at 35 stations just over and around the Bear Seamount. Over 400 species of deepsea cephalopods, fishes, and crustaceans were enumerated from epipelagic, mesopelagic, and bathypelagic habitats. Tissue samples from 54 cephalopod species were preserved, transported to, and evaluated at the NMFS National Systematics Laboratory, National Museum of Natural History, in Washington D.C. Stable carbon and nitrogen isotopic signatures were measured in the lower beaks of 20 representative species to evaluate the trophic structure and foraging ecology of the cephalopod community. Results provide the most comprehensive assessment conducted to date of trophic relationships and ontogenetic migration patterns of this poorly known taxonomic group in the Northwest Atlantic.

Monitoring the American Eel glass eel and elver migration on the Lower Mill Brook, Old Lyme Connecticut. Tripp, James M., Sandra Millán-Tripp, and Scot Tripp, *Tributary Mill Conservancy, Inc. 3 Mill Lane, Old Lyme CT. 06371;* James.M.Tripp@comcast.net
The American Eel is one of many species that migrate up the Mill Brook, the first tributary to the Connecticut River. A highly successful gravity powered, flow through collection system was designed and built to aid in the estimation of the number of migrating glass eels and elvers traveling up the Mill Brook. This collection site is parallel to the brook in the tailrace of an old mill. Attracted by the water flow piped in from the pond, the eels enter the system through a mesh filled pipe which opens at the brook bottom and leads to a 5 gallon covered bucket above water level at the collection location. Glass eels will mostly move from 3:00 p.m. to 8:00 p.m. and they will leave the collection system when air temperature is lower than 10^{o}C or during rain. To estimate migrating numbers, the collected eels are weighted every night (~ 16.67 gm/100 glass eels) and then released unharmed above the dam. This migration takes place during the months of April and May, usually overlapping the alewife migration and Yellow Perch spawning. The American Eel glass eels collected through this method in 2008 numbered ~ 50,000 for the season. This number had declined over the intervening years to its lowest count in 2013; ~8,000 glass eels and ~67 elvers.

Can natural tags be used to distinguish river herring natal origin at different spatial scales? Turner, Sara M. *SUNY College of Environmental Science and Forestry, Syracuse, NY 13210*; smturner@syr.edu
A method for determining the natal origin of river herring (Alewife, *Alosa pseudoharengus* and Blueback Herring, *A. aestivalis*) captured at sea is currently lacking. Otolith elemental (Sr:Ca and Ba:Ca) and isotopic ($^{87:86}$Sr and δ^{18}O) ratios along with genetics were quantified for river herring from throughout their U.S. ranges. At a regional scale, otolith chemistry ratios differed significantly among juvenile fishes from within the Hudson River as well as among the Hudson River and Long Island estuaries; interannual variation was significant but did not substantially decrease reclassification rates. At a coastwide scale, the rates at which fish were reclassified to collection locations varied depending on the natural tags (otolith ratios and genetics) included in the classification models. The natural tags included vary at different temporal scales and thus can provide different information about stock structure.

The physiological effects of catch and release angling on *Paralichthys dentatus* in Long Island Sound. Vogt, Patrick R. and John T. Kelly, *University of New Haven, Department of Biology and Environmental Science, 300 Boston Post Road, West Haven, CT 06516;* pvogt1@unh.newhaven.edu
Summer Flounder (*Paralichthys dentatus)* are a species of both recreational and commercial importance in Long Island Sound. Due to minimum legal size restrictions, Summer Flounder are subjected to catch and release angling within the recreational rod and reel fishery, as many fish caught do not meet the minimum size requirements. Previous studies have investigated angling mortality in Summer Flounder caught in the field; however, no quantification of the physiological effects of catch and release angling have been made for this species. Sixty Summer Flounder were held in captivity in flow-through tanks supplied by water from Long Island Sound. The fish were exposed to one of three experimental treatments, control, 30-second air exposure, or a simulated catch and release event, and then held for 30 days in order to quantify both the lethal and sub-lethal physiological effects of catch and release angling on the species. Flounder exposed to either catch and release angling or air exposure exhibited significantly elevated levels of plasma cortisol 30-minutes post treatment. Plasma glucose and lactate were also elevated in these groups; however, the highest levels of these metrics were noted in the air exposure treatment. Significant post-treatment mortality and dermal parasitic infestation were observed only in fish that were subjected to catch and release angling. It is apparent that summer flounder do experience measurable sub-lethal and lethal effects of stress from the process of catch and release angling, but the most significant long-term impacts appear to be related to increased susceptibility to parasites in line-caught fish.

Summer Meeting Evaluation

Your Comments can help improve future meetings. Please fill out this form and return it to the registration desk at the conclusion of the meeting.

MEETING CONTENT	NOT APPLICABLE	INADEQUATE	SATISFACTORY	GOOD	ABOVE AVERAGE	EXCELLENT
Suitable meeting location and venue?						
Organization of meeting						
Learned useful information?						
Good variety of speakers/topics?						
Discussion Q & A time sufficient?						
How was the keynote speaker?						
Were your goals for attending met?						
Overall rating of meeting						

A. We hope this meeting has provided you with: 1) information you can use professionally, 2) the opportunity to interact with other professionals in your field and, 3) exposure to a broad array of topical issues in the fisheries field. Do you feel these goals were met?

B. How did you hear about this meeting?

C. What is your primary reason for attending? Were your expectations met?

E. Are there any special themes or workshops you would like to see at future meetings?

F. If this is your first time at a SNEC meeting, will you consider attending future meetings?

Please write any additional comments on the back of this sheet
Thank you so much for attending and for helping SNEC to provide better meetings