

President's Message

I hope the Holidays are treating everyone well. Beginning in August at the time of the National AFS business meeting in Ottawa, I became the new President of the Northeastern Division, taking over from Scott Decker of New Hampshire. My background began with a consulting firm, the old Ichthyological Associates, working on the impact of the Salem Nuclear Generating Station on the lower Delaware River in the mid-late 1970s. I then entered graduate school, obtaining a Ph.D. in Biological Sciences from the University of Delaware in 1988. My area was population ecology, and I conducted research on a terrestrial insect herbivore, defenses of its host plant and interactions with its natural enemies. After a few years teaching at area colleges, I began working for the Maryland Fisheries Service on the American Shad and Herring project in the Chesapeake Bay. In 1993, I took a job with the Delaware Division of Fish and Wildlife, where I have worked on industrial impingement and entrainment and marine fishery stock assessment.

I want to fill you in on a couple of issues that were dealt with by the national AFS at the Ottawa meeting. The Governing Board made a decision on the action to be taken on an extensive report on the impact of lead on the aquatic environment. A summary of the report was presented in the May 2008 issues of Fisheries. AFS joined the Wildlife Society in preparing this technical review. Although negative impacts of lead have been observed on waterfowl, these impacts have been restricted to a

surprisingly small number of places, one of which is New England. In aquatic environments, the review found that lead was chemically inert and had no obvious negative effect on aquatic fauna. The Board decided that AFS should engage in education of the findings of the report, but in view of the lack of impact on aquatic environments, should not make an effort to ban the use of lead.

The other issue, Instream Flow, was the subject of a formal Resolution passed at the Business Meeting, representing the membership. This resolution appears elsewhere in this Newsletter. The resolution describes some approaches to regulating instream flow as "seriously outdated" and calls for a central role of fish and wildlife agencies in setting these standards, using a comprehensive, interdisciplinary approach. I would like to suggest that our Chapters consider investigating instream flow regulation in their region, distribute the Resolution widely and consider advocating the recommendations therein.

In the Northeastern Division, our membership has increased, especially in the student category. The national AFS has a great deal for students, including free electronic access to all AFS journals, a hard copy of Fisheries and a low annual dues amount. Last year, a hard-working Committee of some of our leaders put on a great international conference on Diadromous fishes, attracting biologists from all over the world, including Iraq! We are progressing towards publication of the Proceedings, which will probably occur in 2009. I look forward to that event. I hope to

see you in Lancaster, Pennsylvania next April for the Northeastern Fish and Wildlife Conference and the Annual Meeting of the Northeastern Division.

Desmond Kahn



In this issue:

Upcoming Meetings.....2
Call for Award Nominations and Vacant Committee Positions.....3
NE Rivers & Streams Tech Comm5
Fisheries in the News.....6
Instream Flow Program Resolution.....11
Division Leader Contact List.....13

AFS Mission Statement

The mission of the American Fisheries Society is to improve the conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science and promoting the development of fisheries professionals.

- WEBSITE -

The NED AFS has a website:
<http://www.fisheries.org/units/ned>. Check it often for new information and updates!

****UPCOMING MEETINGS****



65th Annual Northeast Fish and Wildlife Conference

April 26-29, 2009
Lancaster, PN

The Northeastern Division (NED) of the American Fisheries Society (AFS) will hold its 57th annual business meeting in



Winter Meeting of the Southern New England Chapter

January 14, 2009
Roger Williams University, Bristol, RI.

The Southern New England Chapter of the AFS will hold its Winter Meeting on Wednesday, January 14, 2009 at Roger Williams University in Bristol, RI. The meeting will feature a full program of oral presentations and a new speed presentation format (3 minutes) for poster presenters, which will also include a lunch-time poster session. We are continuing to offer FREE student registration, but we are requiring students to pre-register by January 7. Please visit our web site at www.sneec-fisheries.org to learn more details (contacts), join, register, or pay on-line using our new easy to use system. Hope to see you there.



139th Annual Meeting of the AFS

August 30-September 3, 2009
Nashville, TN

The 139th Annual Meeting is fast approaching. Registration information, deadlines and an overview of activities may be found on the meeting website at www.fisheries.org/afs09/

6th INTERNATIONAL FISHERIES OBSERVER & MONITORING CONFERENCE



Portland, Maine, USA

July 20 - 24, 2009

6th International Fisheries Observer and Monitoring Conference

July 20-24, 2009
Portland, ME

Please visit www.IFOMC.com for conference information.

CALL FOR AWARD NOMINATIONS

FINANCIAL COMMITTEE MEMBERS SOUGHT BY THE NED

The Northeastern Division of AFS seeks members interested in and knowledgeable of financial and investment issues to help provide advice on those matters to the Division. Interested members please contact Desmond Kahn, NED President via desmond.kahn@state.de.us

DIVISION PROFESSIONAL / EXCELLENCE AWARDS

The Division provides several awards recognizing excellence in professionalism/service. Four of these

awards are administered by the Awards Committee: the Dwight A. Webster Memorial Award, the President’s Award, the Meritorious Service Award, and the Special Achievement Award. The Dwight A. Webster Memorial Award has been presented annually since 1978. The President’s Award was established at the 1993 annual business meeting. The Meritorious Service Award and the Special Achievement Award are the newest Division Professional/Excellence Awards, with the first awards given out at the 2000 annual meeting.

Division Professional/Excellence Awards will be presented at the 65th Northeast Fish

and Wildlife Conference, April 26 – 29, 2009 in Lancaster, PA.

The strongest nominations typically include a resume of the nominee, a letter of nomination, and letters of support from employers, fisheries professionals, and AFS members and officers.

DWIGHT A. WEBSTER MEMORIAL AWARD

This award is presented annually and is the most prestigious recognition given by the Northeastern Division. It may be awarded for any of the following achievements:

- Lifelong contributions to fisheries science and the profession in the Northeast or while working in the Northeast;
- Meritorious/prestigious service to the profession and fisheries;
- Significant academic or technical accomplishments; and
- Long-term service in the Northeastern Division as an AFS member.

PRESIDENTS' AWARD

This award is presented to an individual who is selected by Past Presidents and the incumbent President; it is not limited to Past Presidents. The recipient need not be a current AFS member, and the award need not be presented annually. The award may be presented for any or all the following achievements:

- Promotion of fisheries management;
- Upheld ideals of professionalism; and
- Dedication to AFS and employer.

MERITORIOUS SERVICE AWARD

This award is presented to an individual who must be an AFS member for any or all of the following:

- Leadership and service to the profession and/or AFS;
- Substantial achievements for AFS and the fisheries resource; and
- Significant long-term service to the NE Division within the Division.

SPECIAL ACHIEVEMENT AWARD

This award recognizes an individual or group acting as a team or committee for any or all of the following special accomplishments:

- Notable contribution(s) for conservation and/or the fisheries profession within the Northeastern Division; and
- Administrative or project-related accomplishments.

The recipient(s) need not be an AFS member(s) and the award need not be presented annually.

To make a nomination for any of these awards, please send a resume of the nominee, a letter of nomination, and supporting letters by March 6, 2009 to:

Scott Decker
NH Fish and Game Dept.
11 Hazen Drive
Concord, NH 03301
Phone: 603-271-2491
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John Moring Student Travel Award

The Northeastern Division of the American Fisheries Society supports student travel to the 65th Northeast Fish and Wildlife Conference through **The John Moring Student Travel Award**. This is a competitive award for students who will be

(1) presenting a poster or oral presentation at the Northeast Fish and Wildlife Conference, or (2) attending the conference to carry out Division business. Application details will be available soon on the NED website (<http://www.fisheries.org/units/ned>).

***Northeast Rivers & Streams Technical Committee
(NERSTC) Update***

The NERSTC is in the process of developing a multi-day Rivers and Streams Habitat symposium for the 65th Annual Northeast Fish and Wildlife Conference to be held April 26-29, 2009 in Lancaster, Pennsylvania (see the website www.neafwa.org for further information on the meeting and symposium). The symposium is designed to cover a range of habitat related topics including: instream flow; biotic and habitat associations; riparian and flood plain habitat; habitat classification; habitat enhancement, restoration, and protection; and habitat assessment tools from primarily solicited speakers.

The NERSTC is jointly operated by the Northeast Division and Northeast Fisheries Administrators Association and welcomes new members from the NED. Please consider getting involved to further develop this Committee's potential as a vehicle for improving professional communication and advancing on issues and opportunities of importance to northeast river and streams management and research. Information on the NERSTC can be found on the NED web site (www.fisheries.org/units/ned). Contact co-chairs Larry Miller (larry_miller@fws.gov) or Ken Sprankle (ken_sprankle@fws.gov) for more information. We look forward to hearing from you.

Fisheries - In the News

Bling on sharks pings research data

Delaware State team studies dwindling sand tigers

By MOLLY MURRAY

The Wilmington News Journal



The most valuable fish in Delaware Bay aren't the protected and rare, caviar-rich Atlantic sturgeon or even the local sportfishing king, the weakfish.

Instead, it's a select group of tricked-out sand tiger sharks -- top-of-the-food-chain predators -- that have been outfitted with pinging radio transmitters and satellite trackers.

Once tagged and released, these cyber-sharks swim around with about \$4,500 worth of tracking equipment.

For researchers, these sharks are valuable for another reason. Between 1974 and 1998, the stock of large coastal sharks, a group that includes the sand tiger shark, declined from an estimated population of 8.9 million to about 1.4 million. Between 1980 and 1990, the Atlantic Coast population of sand tiger sharks alone dropped 90 percent, according to National Marine Fisheries Service Data. In 2007, they were listed as a vulnerable species.

"There's almost nothing known about these sharks," said Dewayne A. Fox, assistant professor of fisheries sciences at Delaware State University.

Fox and graduate student Johnny Moore are working on a series of high-tech tracking projects to find out more about the sand tiger shark.

The project began more than a year ago and already researchers say they have made progress.

They've learned that a high number -- about 86 percent -- of the sharks they've tagged come back to Delaware Bay each summer.

What they hope to find out with this tracking project is more detailed information about when and where the sharks travel in Delaware waters and where they go when they aren't in Delaware Bay. This could include information on where the sharks spend the fall, winter and spring -- how far they travel and whether, during this long period, they stay close to shore or move to deeper waters. Ultimately, it could lead to

better information about shark breeding and habitat needs.

The data can also help fisheries managers develop better strategies to protect remaining populations and help them rebound.



Overfishing a problem

Overfishing has led to the population decline. Low reproduction -- a female gives birth to just two pups, once every two years - - influences how fast the species can recover.

Researchers and fishermen know these sharks show up in Delaware Bay in early June and leave sometime later in September.

One recent day, while Fox and his team were working on the bay, they had a shark up along the side of the boat, while other big sharks sliced through the water near the surface.

In fact, Delaware Bay is such a summer hot spot for the fish that many of the sand tigers used for research or on display in large aquariums were captured in the bay's waters.

Not much is known about their traveling habits in the bay and where they go once they leave, Fox said.

Most people assume they are solitary creatures; massive, swimming beasts that are constantly in a feeding frenzy.

"This is not a solitary animal," Fox said. "They travel in groups. ... No one knows where these animals are going."

Tracking the giants

Neither Fox nor Moore are small men, but 8 feet of thrashing tail and gnashing teeth can be daunting. Moore has been bitten before; fellow graduate student Naeem Willett, who does research on sandbar sharks, typically found closer to shore, also has been bitten. They are all careful, talking to one another the whole time, detailing what will happen next and staying clear of the powerful tail and the mouth. All this is done while keeping a data log.

They set out from Bowers Beach in a research vessel set up with commercial fishing gear -- heavy-duty wire leaders, barbless circle hooks and three 1,000-foot-long lines. The hooks, more than two dozen on each long line, are baited with chunks of mackerel.

They set the lines and wait.

At noon, they begin pulling in the line. Hand over hand, Willett pulls. Empty hooks and leaders are clipped free and hung up on the edge of a garbage pail on deck. The line goes into the pail to keep the deck clear.

A few hooks into the pull, the leader stretches tight.

It's a shark, and it's the right species, Fox said, looking over the side.

Fox, Moore and Willett work quickly, pulling the 7-foot sand tiger up along the side of the boat. They loop a rope around the

tail, roll the shark on his back and get to work.

Putting the shark on its back calms the animal and makes it easier to work with, Fox said.

Moore clips a small piece of the back dorsal fin and places it in preservative. It will be shipped to Nova Southeastern University in Florida, where researchers are doing genetic tracking of the sharks. Fox and Moore also are working with University of Rhode Island researcher Brad Wetherbee.

Fox cuts a small slit in the shark's belly and slides in a lipstick-size tube. This radio transmitter sends out a signal unique to that shark. Listening devices placed throughout the bay pick up the signals.

There are additional listening devices along the coast that also pick up the shark's signal. Several fisheries researchers use these radio transmitters, so it isn't unusual for a scientist in Maine to pick up a signal from a fish with a radio tag that was implanted elsewhere along the coast.

Fox stitches the incision closed and then makes a small cut on the shark's upper back into which he will insert the high-tech satellite tag.

"You need it to get through the skin," Fox said.

He pushes hard to press the tag through the shark's tough skin.

Then, he makes a third, tiny incision and pushes in a standard National Marine Fisheries Service tag used to track a variety of species, from billfish to sharks to striped bass.

The team takes length measurements, the hook is removed from the jaw -- using vice

grips to keep hands and fingers away from the teeth -- and, in a matter of minutes, the shark is set free.

During this trip, the team deployed five of the satellite tags and six of the radio transmitters. In all, they had eight sand tigers on their long line.

Waiting for the data

A grid of receivers will start to pick up the radio signals right away. But the satellite tracker will take longer.

For the next several weeks, the shark will move about -- no one is certain where. A computer chip inside the satellite tracker will be recording water depth, temperature, salinity and light levels.

Then, after a pre-set time that ranges from 4 to 6 months, the thin link of cable that connects the data collector to the tag will get zapped with an electrical current. The salt water and the current will corrode the wire cable and allow the data collector to float to the surface. As the satellite passes overhead, the data will be transmitted.

Fox and his team will use computers to see where the shark has been.

A tag that stays on the shark for four months will hold more than 200,000 measurements, Fox said.

The light-level readings will help the researchers backtrack, calculate estimates of sunrise and length of day and come up with longitude and latitude to give them locations where the shark has been, Fox said.

Earlier research done by Fox and Moore indicates the sharks routinely come back to Delaware Bay and stay here from June to September.

Of 25 sharks that got radio transmitters last year, 21 came back this summer, Fox said.

"It shows that we can do this and it also proves the importance of Delaware Bay," Fox said. "It's one of the few places in North America where you can come and catch these guys."

Contact Molly Murray at 856-7372 or mmurray@delawareonline.com.

Secrets of the deep

New research finds Penobscot River sturgeon population burgeoning

By Kevin Miller
Bangor Daily News



Twenty feet down in the dark, ice-cold muck of the Penobscot River near Bangor lurks a creature so reclusive and so mysterious that for decades no one knew it was there.

Armorlike plates run the length of its body, which can exceed 3 feet. It has the undermouth barbels of a catfish, but a tailfin more akin to a shark's. A living fossil, the shortnose sturgeon was apparently around during the latter days of the dinosaurs 70 million years ago.

Now, thanks to modern technology and a dedicated crew of University of Maine researchers, the peculiar habits of the shortnose sturgeon finally are coming to light. The key, researchers have learned, is having a hunch about where to look for this secretive fish and then the time, patience and equipment to find them.

"After we caught that huge batch of fish this fall ... we suspected there were a lot more in the river," said Phillip Dionne, a UMaine master's degree student.

That "huge batch" was 57 fish in a single gill netting. Not bad considering that the first Penobscot population of shortnose sturgeon in nearly three decades was documented just 2½ years ago.

Shortnose sturgeons are small compared to their cousins, the Atlantic sturgeons, which can reach lengths of 10 feet. Both types of sturgeon have been harvested since Colonial times for their meat and eggs, which are prized as caviar. Populations of the fish also have suffered from pollution and dams that disrupted spawning.

Once abundant in rivers from Florida to the St. John in Canada, shortnose sturgeons now are protected as an endangered species by the federal government. Atlantic sturgeons are considered a "species of special concern."

Dionne and his research colleagues were having few problems finding shortnoses one recent, frigid afternoon on the Penobscot south of Bangor (although maintaining feeling in their fingers and noses may have been a challenge).

Rather than gill nets, however, the team was using sonar to nose around the muddy river bottom.

The process began by Dionne and research technician Kevin Lachapelle dropping the heavy, \$70,000 to \$80,000 sonar system —

on loan from the National Oceanic and Atmospheric Administration in Woods Hole, Mass. — and its tripod into the ice-cold river.

Gayle Zydlewski, a professor at UMaine's School of Marine Sciences, then would attempt to interpret the splotches the sonar broadcast to a laptop on the boat. Because the sonar showed all objects — whether fish, rock or piece of river junk — as whitish marks on the screen, Zydlewski paid close attention to shapes and any motion from the objects.

Inevitably, the stealthy sturgeons revealed their presence by showing up as long white bands with tails that gently waved in the current. And where Zydlewski found one sturgeon, she almost always found a lot more.

“There’s one there, and one there. And maybe one there,” said Zydlewski, pointing to the screen. “It’s harder to tell when they slow down” during winter.

But it’s the shortnose’s lethargic nature during winter that makes them easier to find and, more crucially, to count. Shortnose sturgeons apparently spend most of the winter hunkered down on the river floor in groups of anywhere from just a few to a few hundred.

In this case, dozens upon dozens of sturgeons — identifiable by the size of the white smudges on sonar — crowded together on the river bottom.

“When people have done this and gotten good video, they say they look like cord wood just stacked one on top of another,” Zydlewski said.

“We’re not sure if it has to do with depth or what is drawing them to these particular spots,” Dionne said at one point. “I suspect it has to do with river flow where they can conserve energy.”

After scanning for fish in each swath of sonar images, Zydlewski would rotate the camera a turn, scrutinize the screen again and then repeat the steps until she had a 360-degree view of the bottom. The crew then would haul up the sonar contraption, move to the next carefully plotted survey spot and begin the process again.

Lachapelle was present back in 2006 when Dionne’s predecessor on the research project at UMaine, Stephen Fernandes, hauled the first shortnose sturgeon out of the Penobscot. He has since spent countless hours searching for sturgeons on the river, which isn’t a bad job on beautiful Maine summer days when the dress code is shorts and T-shirts.

On this particular day, however, the crew members were covered head-to-toe in hats, gloves and cold-water survival suits as they hauled the sonar, anchors and other equipment from the 37-degree water.

The laptop recorded the sonar images, which an analyst back at their lab would carefully review to count each fish. The information will be used to begin to estimate the population of sturgeons spending the winter in the Penobscot.

“I think we should get a lot of good information,” Zydlewski said.

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990-8250

RESOLUTION ON THE DEVELOPMENT OF INSTREAM FLOW PROGRAM

WHEREAS, the mission of local governing fish and wildlife agencies is to conserve, protect, restore, enhance and manage fish and wildlife resources and their habitats for current and future use, benefit, and enjoyment by state residents and visitors, and;

WHEREAS, the mission of local governing environmental protection agencies is to conserve, manage and provide for maximum public benefit of the natural resources, and;

WHEREAS, these mission statements are consistent with the Public Trust Doctrine, which requires that navigable waters, tide lands, and fish and wildlife resources be managed for the benefit of the citizens to ensure long-term sustainability so as to prevent or minimize harm to these resources, whenever possible, and;

WHEREAS, in some cases the local governing fish and wildlife agency does not have the regulatory authority to issue water use permits nor the ability to coordinate with and effectively influence the permitting decisions of the local governing environmental agency regarding water use, and:

WHEREAS, it is necessary to ensure that sufficient instream flow remains for fish and wildlife resources and outdoor recreational pursuits, and;

WHEREAS, the natural flow regime of streams and rivers is inherently variable and this variability is critical to natural

ecosystem function and native biodiversity in streams and their associated riparian areas and floodplains, and;

WHEREAS, since some local governing resource agencies currently recommend instream flows that are a single flow value (e.g. 7Q₁₀) to accommodate instream habitat needs for aquatic life, which is scientifically unjustifiable and which is typically less than the average natural flow of the stream, and fails to reflect flow variability and cannot meet the habitat needs for all species nor maintain healthy fisheries,

WHEREAS, the American Fisheries Society has adopted and published Policy Statement #9 – Effects of Altered Stream Flows on Fishery Resources (Revised) -- which states “The concept of ‘minimum flows’ and other low flow standards based on statistical records instead of biology (whereby it is assumed that needs of stream fishes can be met as long as some water remains) are seriously outdated.”, therefore be it

RESOLVED, the American Fisheries Society, assembled at its annual meeting on this 19th day of August in the year 2008 at Ottawa, Ontario urges the local governing and provincial fish and wildlife and the local governing and provincial environmental protection agencies in North America to commit the necessary staff and financial resources to the development of instream flow protection programs that contain all the elements listed below:

1. Use an interdisciplinary approach to conduct instream

- flow studies that evaluate and prescribe instream flow needs in terms of hydrology, biology, geomorphology, water quality and connectivity. The spatial scope of instream flow studies should encompass the river channel, the riparian corridor and floodplain systems including connected groundwater.
2. Use a coordinated, interagency, interdisciplinary team approach with adequate staff, training and funding to address all instream flow issues that exist under each agency's responsibilities.
 3. With respect and in conformity to all existing state, federal and provincial laws, mandates and regulations, the local governing fish and wildlife agency should exercise the primary authority for determining the appropriate instream flow necessary to restore, manage, protect and enhance fish and wildlife resources and habitats either directly --- if it has that authority --- or through a formalized process to coordinate such recommendations with and effectively influence the permitting decisions of the appropriate governing environmental agency which has the final authority for setting instream flows.
 4. Commit appropriate fiscal and human resources to maintain or restore flows that reflect the natural seasonal flow pattern in terms of intra-annual factors (magnitude, duration, timing, and rate of change) and inter-annual variability (frequency) to maintain or restore the natural ecological function of riverine resources. Instream flow programs and actions should focus on preserving or restoring intact functioning ecosystems rather than on single species or isolated stream segments.
 5. Incorporate public input into the decision-making process through direct efforts to inform the public regarding a) how instream flows are administered and the benefits they provide, b) the opportunities and limitations afforded by local governing and federal laws and policies for each, and c) ways they can effectively participate in instream flow decision-making processes and issues.
 6. Monitor riverine pre- project conditions and post-project responses of habitat and populations to instream flow recommendations to document the utility of the recommendation and assess the need for modification of recommendations and where appropriate use a formal adaptive management process, to address uncertainty and modify instream flow recommendations in the event goals are not achieved.



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Sept. 2008 –Sept. 2009

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