

TIDEWATER PRESS

NEWSLETTER OF THE
TIDEWATER CHAPTER OF THE
AMERICAN FISHERIES SOCIETY

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President's Corner | *Robert Aguilar*

Hello Tidewater! I trust everyone is a having an enjoyable, non-heatstroke filled summer awash with many fine days on the water. Even with the tropical heat any day spent out under the sun in the marsh/bay/river is better than one tethered to computer and mouse. That said, I am certainly relishing the air conditioning as I type. This summer has been a particularly busy one at SERC. In our local Rhode River, we surgically implanted ultrasonic transmitters in a number of stingrays (both Atlantic and Cownose), Horseshoe Crabs, and Common Carp. Yes, Carp. Don't believe the hype; they are surprisingly vagile and wily creatures. Further afield, we are monitoring fish use of restored oyster reefs using



DIDSON. We soldier on with our 30+ year trawl, seine, fyke net, and benthic infauna surveys. There are still many ichthyoplankton samples and River Herring collected this spring to process.

Fish and invert collections continue for the Chesapeake Bay barcoding project, which has detected a fair amount of cryptic diversity and what appears to be an unreported non-native decapod. And let's not forget the blue crab sperm—still up to our eyeballs in crab sperm. All this work has been greatly aided by the perseverance of several REU interns and

Smithsonian interns. I highly recommend any current students to consider applying to the SERC internship program. Similarly, I encourage all students to become involved with their respective student

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*President's Corner, continued
from page 1*

sub-units. I believe the major goal of the Tidewater Chapter is to nurture the development of fisheries professionals. Speaking from personal experience, participation in chapter activities and attending/presenting at chapter meetings affords great opportunities for networking and professional ontogeny.

While the student presence is generally strong at annual meetings, there has been a noticeable decline in the attendance of professionals at all levels (state government, federal government, non-profit, private sector, etc.). The

participation of professionals is critical to meeting the goals of promoting the professional development of students and recent graduates. Not only do they get the opportunity to present their own data to the larger community in a supportive environment but also experience a wide array of current research and interact with more established members of the scientific community and other students. The exact reasons for waning professional involvement are not well understood. Thus, the EXCOM is currently working on surveys to determine the causal factors and create strategies to mitigate this decline. For those professionals currently reading

this, be forewarned. We count on and look forward to your helpful input.

I would like to conclude my very first President's Corner by thanking all the members of the EXCOM for tolerating this greenhorn and my many inquiries and missed deadlines (*cough* this newsletter *cough*). I encourage all members who wish to become more involved to please contact me or the EXCOM directly. I also need to acknowledge all of the EXCOM's contributions in making the 2016 Annual Meeting a resounding success. I couldn't have done it without their unyielding support. I look forward to next year's meeting in Virginia.



Treasurer's Report | *Stephanie McInerny*

The Chapter made \$930 from the raffle and silent auction at the 2016 Tidewater Chapter Annual Meeting as well as an extra \$910 from donations and excellent budgeting by our President Rob Aguilar who put together a great meeting. The current checking account balance also includes a rebate check (\$40.80) from AFS for 2016 dues. The refund check for 2016 dues will be sent by AFS sometime soon. The check for the silent auction item is still pending and is not included in this total (\$600).

Annual dues for 2016 are \$10.00. If you are not currently a member of the Chapter but would like to join, a membership form can be found on the Chapter website or you can email me at Stephanie.McInerny@ncdenr.gov. A

lifetime membership is available for a onetime fee of \$150.00 and should be sent to:

Stephanie McInerny
TWC Secretary/Treasurer
209 Brigantine Ct.
Cape Carteret, NC 28584

Please make checks payable to: "Tidewater Chapter AFS."

Current Financial Report

Checking:	\$15,364.45
Mutual Fund:	\$ 1,648.55
Total:	\$17,013.00



Tidewater Chapter Annual Meeting Wrap-Up

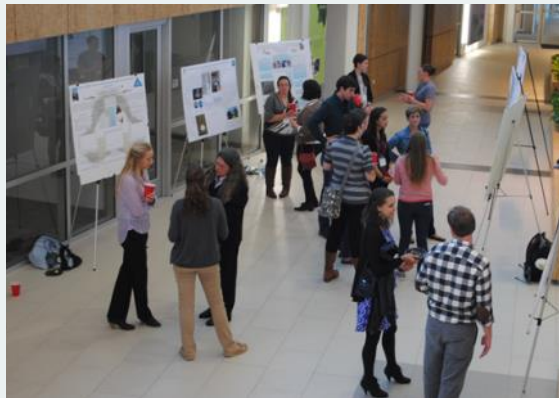
Meeting Highlights | *Robert Aguilar*

The Tidewater Chapter of the American Fisheries Society held its 30th Annual Meeting in Edgewater, Maryland on April 7–9, 2016. We had 80 meeting attendees, nearly evenly split between students and professionals, representing 24 academic, government, non-profit, and private organizations from six states: Maryland, Virginia, North Carolina, New York, Florida, and Delaware.

The poster and oral presentations were generously hosted by the Smithsonian Environmental Research Center (SERC). The meeting kicked off on Thursday afternoon in the newly renovated Mathias Atrium and a tour of the Smithsonian Fish Collection at the Museum Support Center in Suitland, Maryland. A total of 21 posters were presented and 14 were given by students. We received many compliments regarding the food provided by Giolitti's Deli, as well as the high-quality beverages.

This year, a total of 29 oral presentations (18 by students) were held all day on Friday and a half-day on Saturday in SERC's Schmidt Center. Similar to last year, in lieu of the student-mentor lunch, a "round-the-room" ice-breaker was held first thing Friday morning by which students (followed by professionals) gave one minute self-introductions to the

audience. Afterwards, 18 students and 1 professional delivered oral presentations. Saturday morning, 10 professionals delivered oral presentations. Most people stayed for the entirety of oral sessions,



which is always a good indication that folks were interested in the program. The quality of the oral presentations and posters were superb, particularly from the students. A tip of the hat to all involved! Although we pushed back the date of this meeting to avoid any weather issues (re: last year), it ironically snowed for about 5

minutes on Saturday.

The banquet social was held Friday evening at the Chesapeake Bay Foundation's Philip Merrill Center in Annapolis, MD. Attendees enjoyed good company and delicious food provided by Saucy Salamander all while overlooking the beautiful Chesapeake Bay. The banquet social also featured the presentation of awards for best student poster and oral presentations, as well as raffle prize drawings and a silent auction for a VEMCO VR2Tx Receiver valued at \$2,400. The generous donations of space/monies/items provided by Maryland Sea Grant, Smithsonian Environmental Research Center, Chesapeake Bay Foundation, VEMCO, Smith-Root, Giant, Chick-fil-A, Flying Dog Brewery, North Carolina Sea Grant, Minxies' Trinkets, John Cooper, Sara Mirabilio, and myself contributed greatly to the overall success of this meeting.

Thanks to all those who attended the 2016 Annual Meeting, as well as all our meeting sponsors. We couldn't have done it without you. I look forward to another great Tidewater Meeting next year in Virginia hosted by President-Elect Sally Roman!

2016 Tidewater Chapter Awards | Sara Mirabilio

Student Presentations

Student presentations once again carried a successful Chapter meeting. A total of 32 presentations—14 posters and 18 oral papers—were evaluated and scored by six volunteer judges. Cash awards were presented during the Awards Banquet held at the Chesapeake Bay Foundation's Philip Merrill Environmental Center in Annapolis, Md.

In the poster category, the judges selected these winners:

- **First Place (\$150):** Sammie Alexander, Potomac Environmental Research and Education Center, George Mason University, for her research on the influence of temperature on the growth of young-of-year Blueback Herring (*Alosa aestivalis*) in Potomac River tributaries.
- **Second Place (\$100):** Verena Wang, Department of Biology and Marine Biology, University of North Carolina Wilmington, for her research characterizing otolith geochemical signatures from regional nurseries of Southern Flounder (*Paralichthys lethostigma*).
- **Third Place (\$50):** Ammar Hanif, Institute of Marine and Environmental Technology, University of Maryland Center of Environmental Science, for his research using nature's ultimate environmental sampler—a look at the stomach content of Gulf Menhaden (*Brevoortia patronus*) using molecular signatures.

In the oral paper category, the judges

selected these winners:

- **First Place (\$150):** William Goldsmith, Virginia Institute of Marine Science, William and Mary School of Marine Science, for his research on the effects of air exposure on post-release mortality rates of White Marlin (*Kajikia albidus*) caught in the U.S. offshore recreational fishery.
- **Second Place (\$100):** Vaskar Nepal KC, Virginia Institute of Marine Science, William and Mary School of Marine Science, for his research on spatial and temporal variability in size of young-of-year Blue Catfish (*Ictalurus furcatus*) in Chesapeake Bay subestuaries.
- **Third Place (\$50):** Alexandra Atkinson, Chesapeake Biological Laboratory, University of Maryland, for her research on the influence of environmental condition on the age, hatch dates, and growth of juvenile Atlantic Menhaden (*Brevoortia tyrannus*) in the Choptank River, Md.

EILEEN SETZLER-HAMILTON MEMORIAL SCHOLARSHIP

The **Eileen Setzler-Hamilton Memorial Scholarship** is awarded to a graduate student currently enrolled in a fisheries science or closely-related curriculum who has displayed a commitment to excellence in research, teaching, professional undertakings, public education, and community service. This award was created in 2003 to remember Dr. Eileen Setzler-Hamilton, a long-time member of the American Fisheries Society

(AFS) and fourth President (1989) of the Tidewater Chapter.

This year, we received five applications from four institutions (UMES, UMCES/CBL, ECU, and NCSU) — the most ever! In the end, the Awards and Scholarship Committee decided this award is really about a “coastal scientist enthusiast” who passionately engages with other students and the public out of the beauty they feel privileged to witness each day in the field. That was Eileen.

The “Eileen Award” winner for 2016 was Rebecca Peters, a master's student in the Marine-Estuarine-Environmental Sciences Graduate Program at the University of Maryland Eastern Shore (UMES). Under the guidance of Dr. Paulinus Chigbu, her thesis investigates the ecology of juvenile Black Sea Bass, *Centropristis striata*, in the Maryland Coastal Bays. Rebecca presented some of this research at the 145th AFS Annual Meeting and recently submitted a manuscript to the peer-reviewed journal *Fishery Bulletin*. She holds a Bachelor of Science in Biology from Old Dominion University in Norfolk, Va.

But what was most notable about Rebecca's application was her leadership, outreach, and community service endeavors. She is an active member of the UMES Student Subunit, serving as vice president from fall 2015 to fall 2016. As a member of the Graduate Student Association, Rebecca organized and led the first campus-wide Earth Day cleanup. This past summer, she served as a graduate

Awards, continued

mentor for the UMES Coastal Research in Environmental Science and Technology, or CREST, Research Experience for Undergraduates Program. Quoting her personal statement, “Though she [REU student] started her REU with little experience in marine science, I was able to empower her to take on new challenges and gain confidence in conducting research. As a professional scientist, I hope to continue mentoring aspiring scientists as a regular part of my career.” And, this merely is what she has accomplished in the last year. There are numerous more accounts of her peer and community engagement efforts before beginning her graduate research.

For example, Rebecca volunteered with the Florida Department of Environmental Protection, specifically the Coral Reef Conservation Program. While there, she prepared a presentation on broad categories of marine resource management and listed pros and cons of each so as to educate stakeholder working groups engaged in a community planning process, called Our Florida Reefs, on options for coral reef management in southeast Florida.

Her reflection on a study abroad tells the sum parts of her character: “My time abroad helped me realize my aspirations to do more than just collect and analyze data—I wanted to communicate my research to a diverse audience of environmental managers, policy makers, and resource users to help develop effective natural resource management plans.”

SPECIAL RECOGNITION AWARDS

The **Conservation Award** is given to an individual, resource management agency, business or nonprofit organization that the Tidewater Chapter of the American Fisheries Society deems has accomplished notable fisheries or habitat conservation activities.


The 2015 Conservation Award recipient is former Maryland State Senator C. Bernard “Bernie” Fowler. Accepting the award on his behalf was his granddaughter Karla Osburn and her husband Richard. The University of Maryland (UM) Student Subunit nominated Senator Fowler for the Conservation Award particularly owing to his work with his annual “Senator Bernie Fowler Patuxent River Wade-In.”

They write: “When he was a boy, Mr. Fowler would frequent the Chesapeake Bay beaches and see how far he could walk directly into the water before he could no longer see his white sneakers at the bottom. When he became a young man, Mr. Fowler continued this childhood fancy. He became increasingly concerned as the amount of steps it took before he was unable to see his shoes decreased each year. Mr. Fowler understood that this decline in visibility was a symptom of a larger problem - a rapid decline in the water quality of the Chesapeake Bay. To take action against what he believed was a pressing threat to the ecosystem he loved, Mr. Fowler ran for, and was elected to serve as, a Calvert County Commissioner from 1970–1982. Following this, he distinguished himself in ser-

vice as a State Senator crafting legislation, from 1983–1994, to reduce nutrient pollution in the Bay. Throughout his service as an elected official, he continued his ‘sneaker test;’ we now can use this simple measurement as a long-term data set of turbidity in the Patuxent River Tributary of Chesapeake Bay. Of greatest interest, these data have been used as an indicator of improving bay health following his legislative actions. Impressively, at age 92, Mr. Fowler still is conducting his annual ‘sneaker test,’ which has become a well-attended public event. As students of the UM Center for Environmental Science, we utilize the annual ‘Bernie Fowler Wade-In’ to educate the public about the effects of runoff and other point and nonpoint source pollution in the Bay. We appreciate this opportunity to do so, and are so grateful to have such a charismatic man like Bernie Fowler advocating for Chesapeake Bay research and restoration.”

The **Excellence in Fisheries Education Award** is given to an individual who has achieved excellence in teaching and student advising in the field of fisheries science or closely-related curriculum, and who also encourages student participation in American Fisheries Society, Tidewater Chapter, and other fisheries-related meetings.

The 2015 Excellence in Fisheries Education Award recipient was Dr. Thomas J. Miller, professor, University of Maryland Center for Environmental Science (UMCES), and director, Chesapeake Biological Laboratory (CBL). As director of CBL, Dr. Miller has advanced graduate education

Continued on next page 

Awards, continued

indirectly by advocating and raising funds to ensure that all students are fully supported at CBL. But, it is clear that mentoring and teaching is his priority. Dr. Miller has directly advised numerous graduate students in his 20-plus years at CBL. The UM Student Subunit nominated Dr. Miller for his strong support of professional development, bringing resources to the whole of the student body, not just his own advisees.

Dr. Miller currently is co-teaching a graduate-level course in Fish Ecology which, in addition to providing strong background about fisheries science and management, prepares students to write a high-level research proposal, a professional skill often overlooked, but much needed, during graduate training. Dr. Miller also co-teaches a Quantitative Methods in Environmental Science course, which according to the UM Student Subunit, is what "...many students at CBL view as the most useful of their career in graduate school." The course covers both theoretical and practical data analysis methods for students in fisheries science, and Dr. Miller is available for guidance throughout the semester for all students in the course.

The Student Subunit in their nomination cites a multitude of additional activities: coordinating student "brown-bag" talks every Friday during academic semesters and a series of "Science for Citizens" lectures. The Student Subunit noted that Dr. Miller gives the principal lecture each semester of these informal talks, open to the public, "...setting a fantastic example for students and faculty

alike to be engaged in teaching the community. These lectures have been highly successful, and when members of our local community come up to engage with Dr. Miller afterwards, it is clear that he is delighted to share his knowledge with them."

In closing they write: "We cannot possibly imagine a CBL without Dr. Miller, whose tireless efforts in education have not only benefited us, the students, but also the fisheries community and wider public."

The Meritorious Service Award is given to a member of the Tidewater Chapter of the American Fisheries Society for their unswerving loyalty, dedication and service in advancing the programs, objectives, and long-term goals of the Chapter.

The 2015 Meritorious Service Award recipient was Stephanie McInerney, Chapter secretary and treasurer since 2006. Our checking and mutual fund accounts have grown since she has had held the position. Steph continues to be an invaluable aid in preparing the annual meeting. She is dependable, knowledgeable, and always willing to help out.

A plentiful amount of nominations came in for Chapter members nominating Steph for the award. One nominator wrote: "I can recall my time on the EXCOM, and she always was the one willing to carry the majority of the load. We were transitioning from the checkbook to online banking, and it was Steph that made this happen. It was ugly and frustrating for her, but she never got mad. She just laughed (like she always does), smiled and said, 'I got this.' I

think that sums up her contribution to the Chapter after all these years. She truly is one of the pillars that holds things up."

Another wrote: "Steph was critical as the institutional memory when we revised the Bylaws. She is the person who most reliably steps up when something needs to be done, and she always does a great job with whatever it is. Steph is the main reason that we have modern methods to register and pay for the annual meeting; she found the company that we use to run the online registration and set up the system so that we can accept credit card payments. I think she's the main reason the Chapter has been running so well."

For all her service, Steph never has won the Meritorious Service Award; she received the Special Presidential Award in 2007 and 2012.

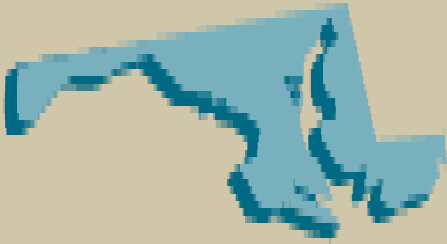
Passing of the Toadfish

Outgoing Tidewater Chapter president Scott Baker, a fisheries extension specialist with North Carolina Sea Grant, officially inducted Rob Aguilar, a biologist with the Smithsonian Environmental Research Center, as the 2016 president of the Chapter. The ceremony included the traditional "passing of the toadfish."

Outgoing President's Award

As his first act, Chapter president Rob Aguilar presented past-president Scott Baker with the gavel award for his leadership of the Chapter in 2015, and for his particular assistance to the president-elect in arranging the 2016 annual meeting.

Maryland State Update | *Bob Murphy*



Nine-Year-Old Sets New Maryland Fishing Record

The Maryland Department of Natural Resources has confirmed that Emma Zajdel, 9 (weighing in at 65 lbs), of Ocean City, has set a new state fishing record with a 94.6-pound Cobia.

Here is Emma's story:

Emma Zajdel and her father, Ed, were fishing near Little Gull Shoals about a mile and a half east of Assateague Island on June 30, hoping to catch some Bluefish. They were trolling two lines off their boat near what appeared to be breaking blues when a line went tight. Robert took the rod from the rail and handed it to Emma, who had a fighting belt on, just in case. No sooner had she set the rod in place than the fish took off, and Emma set the hook.

"At first, we thought it was a shark, and the line was going out," Emma said. "I could hear the reel and the drag and I thought I could go over the side."

The battle lasted about 20 minutes. Ed said, "I kept the boat in gear and followed the fish at a 45-degree angle to keep the line tight and Emma settled. When she got the fish in, and we lifted it on board, it went ballistic. Emma and

Ashton scurried to the front of the boat while Robert and I wrestled the fish into the fish box and iced it down."

They kept the fish iced overnight and took it to the certified scale at Sunset Marina, where DNR fisheries biologist Steve Doctor inspected and confirmed the species and the catch. The fish measured-in at 66.5-inches long. Emma, by the way, is 52-inches tall.

This breaks the previous 79-pound state record set by Jack Latimer in 2014. The Cobia fishery is currently closed in federal waters. This fish was caught in Maryland waters where there are no restrictions on catching and keeping cobia. Emma's catch could become a new International Game Fish Association Small Fry World Record for a fish caught by an angler under the age of 10. The current record is 48 pounds. Either way, the fish was put to good use. According to Emma, "It tasted very good."

53,000 Acres of Submerged Aquatic Vegetation Mapped in Maryland

The Maryland DNR reported that underwater grass abundance—a key indicator of water quality—in the state's portion of the Chesapeake Bay increased 29 percent between 2014 and 2015, reaching a new record of 53,277 acres. This puts Maryland at nearly 94 percent of its 2017 restoration goal of 57,000 acres. In Maryland,

five bay rivers surpassed their restoration goals last year. These included the upper and middle Chester River, the Elk River, the Bush River, Fishing Bay, and the Chesapeake and Delaware Canal. Additionally, several rivers witnessed record grass growth, including the upper Chester River, the middle Choptank River, the Big Annemessex River, the Manokin River, Tangier Sound, and Middle River.

The rise in underwater grasses is attributed not only to an expansion of widgeon grass—characterized as a boom-or-bust plant—in portions of the mid-bay but to a variety of freshwater grasses, like wild celery, that grow in the upper and fresher portions of the bay. Maryland's biggest and most iconic underwater grass bed, located in the Susquehanna Flats, has been steadily recovering since 2011, and reached over 5,200 acres in 2015, showcasing the bed's resilience.

Water monitoring results for the Eastern Shore indicate long-term improvements in clarity as a result of reduced nutrients and sediments. Bay grasses in this region responded to the improving water conditions for the fourth year in a row and are continuing to provide increased habitat for blue crab, a fishery that has shown an apparent boom year in 2016.

The annual underwater grass aerial survey was conducted by the Virginia Institute of Marine Science

Maryland, continued

between May and November 2015.

Return of the Native

One of the Chesapeake Biological Laboratory's graduates has returned to Chesapeake waters, but now as faculty and mentor for graduate students. Dr. Ryan Woodland has recently returned to the CBL in Solomons, MD, as an Assistant Professor specializing in trophic and food web ecology. As a graduate student advised by Dave Secor at CBL, Ryan earned a PhD (2010) and MSc (2005) degree in Fisheries Science through the Marine, Estuarine & Environmental Sciences Department at the University of Maryland and was an active student member of the Tidewater Chapter. He is returning to CBL and UMCES after holding postdoctoral positions at the Université du Québec à Trois-Rivières in Québec, Canada (2010–2011), and Monash University in Victoria, Australia (2011–2015).

Ryan's research focuses on the

consequences of environmental, physical and anthropogenic conditions on the realized trophic niche of individual species or functional groups and as structuring agents of entire food webs and communities in coastal ecosystems. His research interests also include the influence of land use on the ecological function of downstream estuaries, effects of anthropogenic climate change on coastal ecosystems, and the consequences of biological coupling of nutrient pools across ecological boundaries (e.g., benthic-pelagic, atmospheric-aquatic). In addition to traditional approaches such as stomach contents analysis, much of his work involves the use of natural abundance stable isotopes as tracers of nutrient transfer within ecosystems and as indicators of trophic relationships. His interest in stable isotope ecology includes the application of established methods to explore trophic structure and the exploration of new methods for analyzing and interpreting stable isotope data.

Ryan is currently involved in a number of local and international research projects, including: 1) analysis of spatial and temporal dynamics of key forage taxa in Chesapeake Bay and its tributaries; 2) the influence of groundwater-delivered nitrogen as a driver of plankton community dynamics in Australian estuaries; 3) the effect of hydrodynamics and vegetation structure on the trophic ecology and recruitment success of Australian Bream (*Acanthopagrus butcheri*); 4) the metabolism of mysid shrimp and their role in Chesapeake Bay food webs; and 5) the cascading effects of catchment land use on nutrient regimes, primary producers and food web structure in southeastern Australian estuaries. Ryan currently has a master's student (Ginni La Rosa) whose research is on the trophic ecology of Black Sea Bass (*Centropristis striata*) in the Mid-Atlantic Bight. Ryan is also mentoring a summer REU student conducting respirometry experiments on mysid shrimp.

Virginia State Update | Willy Goldsmith



Virginia's Blue Crab Winter Dredge Fishery to Remain Closed for the 2016-2017 Season

On June 28, the Virginia Marine Resources Commission (VMRC) unanimously voted to keep Virginia's Chesapeake Bay Blue Crab winter dredge fishery closed

for the ninth consecutive year. The fishery has been closed each winter since 2008 as part of an effort to protect female Blue Crabs that spend the winter buried in the sediment and are the primary target of the winter dredge fishery. Many of these female crabs are age-

Continued on next page

Virginia, continued

0 individuals who, if harvested, would not have the opportunity to reproduce and contribute to the Blue Crab population during the following year. The most recent Blue Crab abundance estimate, based on the 2016 winter dredge survey, indicated that the total population of Blue Crabs in Chesapeake Bay was 553 million, a 35% increase from 2015. The population of spawning females increased from 101 million to 194 million, nearly three times the minimum safe threshold of 70 million, although the estimate remains below the target level of 215 million. In light of the abundance increase, the VMRC voted to extend the end of the crabbing season for 2016 and to open the 2017 season two weeks earlier.

For additional information, contact Katie May Laumann: Katiemay.Laumann@mrc.virginia.gov

Observer Program Aims to Quantify Atlantic Sturgeon Bycatch in Virginia's Commercial Fisheries

With the Chesapeake Bay distinct population segment of Atlantic Sturgeon listed as endangered, understanding the degree of the species' interaction with commercial fisheries is critical for informing ongoing conservation and management strategies. New for 2016, the VMRC has initiated an effort to estimate incidental Atlantic Sturgeon capture by commercial gill-net fishermen

targeting species such as Atlantic Croaker, Striped Bass, and catfish. The program, led by VMRC Fisheries Biologist Chris Davis, aims to observe approximately 1% of commercial gill-net trips taking place in Virginia waters each year. Observer efforts will focus on gill-net fisheries occurring in Chesapeake Bay, the James, York, and Rappahannock rivers, and the Virginia Beach and Eastern Shore ocean fronts.

For additional information, contact Chris Davis: Christopher.Davis@mrc.virginia.gov

VMRC Implements Pilot Programs to Improve Monitoring of the Recreational Cobia Fishery

In 2015, recreational Cobia landings from Georgia to Virginia were estimated to have nearly tripled the 630,000-pound annual catch limit for the region. There was, however, a significant amount of uncertainty regarding the total

estimate, which was obtained by the NOAA Fisheries Marine Recreational Information Program (MRIP). As a result of the overage, managers were required to close the recreational Cobia fishery in federal waters on June 20, 2016, though individual states were not required to close the fishery in state waters. For 2016, Virginia anglers are allowed to possess one Cobia per person (maximum two per vessel) at a minimum size of 40 inches, with no more than one of the fish allowed to exceed 50 inches and the season closure set for August 30. These regulations are significantly more restrictive than those for 2015, which consisted of a 37-inch minimum size and a one fish per person limit (no vessel limit).

In an effort to improve estimates of Cobia fishing effort and landings in the state for future management purposes, the VMRC has implemented pilot permitting



Beginning in 2017, Virginia's recreational Cobia anglers will be required to purchase a permit and report their Cobia fishing effort and catch (Photo courtesy of Ken Neill).

Virginia, continued

and reporting programs for the recreational Cobia fishery for the 2016 season. Beginning in 2017, recreational anglers will be required to obtain a permit in order to fish for Cobia and will be required to report their Cobia fishing effort and harvest. For 2016, permitting and reporting are voluntary; about 400 private recreational anglers and 20 charter captains have signed up.

“With no Cobia stock assessment scheduled until 2018, the goal for now is to rein in harvest and achieve a better understanding of how many anglers are out on the water and how many Cobia they are catching,” says VMRC Fisheries Management Specialist Ryan Jiorle, who is in charge of the program and noted the low confidence that recreational anglers have in the MRIP landings estimates. “Our anglers want to see some more accountability.”

The permit will be free to obtain for recreational saltwater anglers, and beginning in 2017, reporting

will be required—even if no Cobia are harvested—in order to obtain a permit for the following year.

For additional information, contact Ryan Jiorle:

Ryan.Jiorle@mrc.virginia.gov

VIMS Graduate Student Uses Genetics to Explore Chesapeake Bay Striped Bass Population Size and Structure

How many Striped Bass are in the lower Chesapeake Bay and within each major river system? And how genetically distinct are Striped Bass that enter these different rivers to spawn? Virginia

Institute of Marine Science (VIMS) Master’s student Savannah Michaelson plans to answer these questions using genetic analyses of adult and young-of-year (YOY) Striped Bass sampled by Striped Bass survey programs.

“Most of what we know about the Striped Bass population is at the level of the Atlantic Ocean, not the Chesapeake Bay, let alone specific rivers,” says Michaelson, who is advised by Dr.

John Graves and is closely collaborating with Drs. John Hoenig and Jan McDowell on the project.

Michaelson plans to use a genetic technique known as parentage analysis to match spawning adults with YOY fish, information which can be used to estimate population size. Fin clips were obtained from spawning adults that were tagged and released in the James, Rappahannock, and York rivers during late winter and spring 2016 by VIMS researchers participating in the US Fish and Wildlife Service’s Cooperative Striped Bass Tagging Program. The program, which captures adults as they migrate upriver to spawn, closely collaborates with commercial gill-net and pound net fishermen, who supply the fish that are tagged. YOY Striped Bass, meanwhile, are being collected through the VIMS Juvenile Striped Bass Seine Survey during the summer of 2016.

The DNA obtained from the sampled fish will be used to match YOY Striped Bass with spawning adults. The frequency with which such parent-offspring pairs are encountered can provide insight into the size of the population, both within each of the major river systems and within the lower Chesapeake Bay as a whole. Put simply, fewer “recaptures” of a given genetic marker (i.e., a parent-offspring pair) suggests a larger population. “The approach is analogous to a conventional mark-



VIMS graduate student Savannah Michaelson obtains a DNA sample (fin clip) from an adult Striped Bass. By identifying whether young-of-year Striped Bass are the offspring of previously captured adults, she will be able to estimate the Striped Bass population in the lower Chesapeake Bay.

Virginia, continued

recapture study except that, instead of using spaghetti tags, we are using genetic loci to mark Striped Bass and their offspring,” Michaelsen explains. Identification of parent-offspring pairs may also help to improve understanding of the factors that contribute to an adult Striped Bass’s probability of reproductive success—if, for example, larger, older individuals are more likely to produce viable offspring that are subsequently captured in the seine survey.

In addition to estimating population size, Michaelsen will use genetic markers to determine

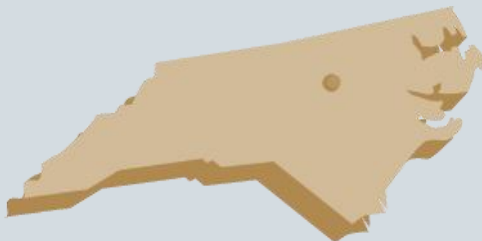


whether the Striped Bass within each of the three river systems are genetically distinct, which would

suggest spawning site fidelity among adult Striped Bass and thus have important implications for river-specific management strategies.

Eventually, she hopes to compare her findings with those of the Cooperative Striped Bass Tagging Program, whose recapture information can also be used to estimate spawning site fidelity and population size.

North Carolina State Update | Jacob Boyd



Stock Status Report for 2016

The North Carolina Division of Marine Fisheries (NCDMF) issues stock status reports annually, which serve as a general barometer of the overall health of the various species encountered in North Carolina’s waters. The stock status is based on biological data collected through fisheries-independent and fisheries-dependent sampling methods from the previous year. The reports serve to prioritize species for the development of fishery management plans (FMP)

or plan amendments. There are five stock status categories:

Concern - Stocks designated as of concern are those stocks that exhibit increased effort, declining landings, truncated age distribution, or are negatively impacted by biotic and/or abiotic factors that cannot be controlled. Stocks with or without an approved stock assessment or FMP but are exhibiting declining trends may be classified as of concern as well as stocks whose assessments have unreliable benchmarks (i.e., overfishing cannot be determined). This category designates that overfishing is occurring but that the stock is not overfished. Currently, the NCDMF includes the following finfish stocks in a status of Concern: Striped Bass

(ASMA and CSMA – *Morone saxatilis*), snapper-grouper (59 species), American Shad (*Alosa sapidissima*), Atlantic Croaker (*Micropogonias undulatus*), sharks (40 species), Southern Flounder (*Paralichthys lethostigma*), Summer Flounder (*Paralichthys dentatus*), Black Sea Bass (north of Hatteras – *Centropristis striata*), and Spot (*Leiostomus xanthurus*).

Depleted - Stocks designated as depleted are those stocks where the spawning stock abundance is below a predetermined threshold or where low stock abundance precludes an active fishery. Factors that can contribute to depleted status include but are not limited to fishing, predation, competition, water quality, habitat loss, recruitment variability, disease, or

Continued on next page

North Carolina, continued

a combination of these factors.

Determination is based on approved NCDMF, Atlantic States Marine Fisheries Commission (ASMFC), and/or regional Council FMPs and/or stock assessments. This category designates that overfishing is occurring and that the stock is overfished. Currently, the NCDMF includes the following finfish stocks in a status of Depleted: Weakfish (*Cynoscion regalis*), Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*), and River Herring (ASMA – *Alosa* spp.).

Recovering - Stocks designated as recovering are those stocks that show marked and consistent improvement in the criteria listed for a viable stock. A recovering species may still be depleted but would be defined as one that, under a current plan, shows measurable and consistent improvement but has not yet reached the target(s) of a specific FMP. This category designates that overfishing is not occurring but that the stock may be overfished. Currently, the NCDMF includes the following finfish stocks in a status of Recovering: Red Drum (*Sciaenops ocellatus*) and Gag Grouper (*Mycteroperca microlepis*).

Unknown - Stocks designated as unknown are stocks for which insufficient data are available to determine trends in effort, landings, age distribution, recruitment, etc. Many stocks that have been designated as unknown have been captured in NCDMF

sampling programs that may result in sufficient data to designate a status in the future. Currently, the NCDMF includes the following finfish stocks in a status of Unknown: Sheepshead (*Archosargus probatocephalus*), Hickory Shad (*Alosa mediocris*), and River Herring (all areas except ASMA).

Viable - Stocks designated as viable are stocks that exhibit stable or increasing trends in average length and weight, catch per unit effort, spawning stock biomass, juvenile abundance indexes based on historical averages, stable age structure that includes representatives of the older age classes, and stable or declining trends in fishing mortality. Stocks deemed recovered by a NCDMF, ASMFC, or regional Council FMP would be considered viable. A stock is considered recovered when it has reached the target(s) for sustainable harvest, spawning stock biomass, spawning potential ratio, fishing mortality, size/age structure, or any other biological target required in an approved NCDMF, ASMFC and/or regional Council FMP. This category designates that overfishing is not occurring and that the stock is not overfished. Currently, the NCDMF includes the following finfish stocks in a status of Viable: Bluefish (*Pomatomus saltatrix*), Black Sea Bass (south of Hatteras), kingfishes (*Menticirrhus* spp.), Spotted Seatrout (*Cynoscion nebulosus*), Striped Bass (Atlantic migratory),

Atlantic Menhaden (*Brevoortia tyrannus*), Striped Mullet (*Mugil cephalus*), Spiny Dogfish (*Squalus acanthias*), Black Drum (*Pogonias cromis*), Scup (*Stenotomus chrysops*), Dolphin (*Coryphaena hippurus*), King Mackerel (*Scomberomorus cavalla*), and Spanish Mackerel (*Scomberomorus maculatus*).

For the 2016 Stock Status Report, Summer Flounder was the only species to be reclassified and was moved from “viable” to “concern” based on the 2015 National Marine Fisheries Service Northeast Fisheries Science Center benchmark stock assessment indicating the stock is not overfished but overfishing is occurring.

New State Records

A new state record Pigfish, *Orthopristis chrysoptera*, was certified by the North Carolina Division of Marine Fisheries on



Continued on next page

North Carolina, continued

May 23, 2016. The fisherman, from Rocky Mount, North Carolina caught the 2-pound, 12-ounce fish while fishing on a headboat approximately 30 miles southeast of Cape Lookout using cut squid. The fish was 15.5 inches total length with a girth of 14 inches. The former state record for this species was recorded in 1991 and weighed 2 pounds, 4 ounces. There are currently two catches that are tied for the world record with both fish weighing 3 pounds, 5 ounces and were caught off of New Zealand in 2011.

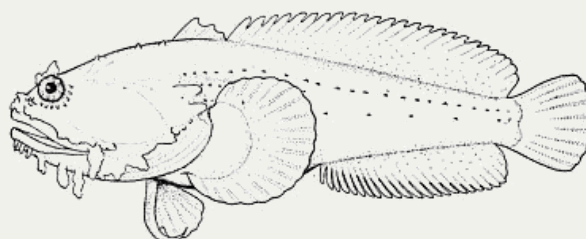


A new state record Skipjack Tuna, *Katsuwonus pelamis*, was certified by the North Carolina Division of Marine Fisheries on May 24, 2016. The fisherman, from Valdese, North Carolina caught the 32-pound, 8-ounce fish while fishing at the Rock Pile which is approximately 23 miles off Hatteras Inlet in the Gulf Stream using Ballyhoo. The fish was 37 inches fork length with a girth of 25 inches. The former state record for this species was recorded in 2014 and weighed 32 pounds, 0 ounces. The world record is 45 pounds, 4 ounces and was caught off of Baja, Mexico in 1996.

University of Maryland Student Subunit Update | *Emily Liljestrand*

This has been a fairly productive season for the University of Maryland AFS Student Subunit! Our events are usually tied up in the goings-on at the Chesapeake Biological Laboratory, and these past few months were no exception. The 40th annual Larval Fish conference was held in our own backyard. To prepare, we had student subunit meetings to practice and improve our talks. These efforts likely paid off. Our own treasurer, Gray Redding was awarded second place in the student poster competition! In all, it was a great way to network with other fisheries

professionals from across the globe. It also gave us a chance to sell our subunit shirts, as part of our ongoing fundraising efforts.



Speaking of ongoing projects, we are principally engaged in two recurring activities this summer. We are reading "Four Fish" by Paul Greenberg and meeting once a month

to discuss the chapters as part of an ongoing summer book club. Secondly, on the first Saturday of each month we've gone to our local state park—Calvert Cliffs State Park—and performed seine net demonstrations to the visiting public. One day in particular provided a lucrative haul—we found eels, crabs, silversides, and much more! With any luck we will be able to develop and expand this into a semi-permanent recurring event through the fall. As always, you can read more about these and all our events on our blog at <http://afs-umd.blogspot.com/>.

University of Maryland Eastern Shore Student Subunit Update | *Noelle Olsen*

Our student subunit has been quite busy these past couple of months with volunteering and research opportunities! To celebrate Earth Day, our student subunit collaborated with our Graduate Student Association club to host a campus-wide cleanup. Over twenty undergraduate and graduate students came out to help brighten our Princess Anne campus! Also in April, we were able to assist the Maryland Coastal Bays Program (MCBP) with their Ilia Fehrer Nature Preserve restoration project in Berlin, MD. In collaboration with Maryland DNR, Worcester County, MD, and the Trust for Public Land, MCBP is working to protect 430 acres of forest in addition to restoring 60 acres of loblolly pine monoculture to a polyculture deciduous wetlands. We had the pleasure of teaching some middle schoolers from Snow Hill Middle School about the importance of forests to watershed health and quality through a hands-on demonstration.

We were lucky enough to have four of our graduate students attend the Tidewater Chapter annual meeting in Annapolis, MD. Both the poster session and oral presentations were successful and informative, and we were able to make some great connections with other Tidewater researchers. We are very proud of Rebecca Peters for being awarded the Eileen Setzler-Hamilton Memorial Scholarship for her continuing dedication to outreach opportunities and inspiring young adults in marine science and conservation! Due to the

remote nature of UMD's Marine Estuarine Environmental Science (MEES) program—as always—it is a pleasure to have the chance to meet up with the students and professors from the Chesapeake Biological Laboratory in addition to meeting new faces from the other Tidewater Chapter student subunits.



Stephanie Martinez aboard the NOAA Ship Okeanos Explorer in the Control Mission Room and behind is the multi-beam screen to the left and the planning screen to the right.

This past semester, three of our students were able to volunteer on NOAA research vessels utilizing technology to survey and map waters across the globe! Rebecca Peters spent ten days onboard the NOAA R/V *Nancy Foster* during their Essential Fish Habitat in the Caribbean research cruise. This cruise mapped the seafloor Northeast of St. Thomas, USVI, which hadn't previously been mapped, using multi-beam and split-beam echosounders to provide bathymetry of the seafloor. The split-beam survey also provided data on fish hotspots by detecting areas of fish aggregations. Stephanie Martinez spent three weeks aboard NOAA Ship Okeanos Explorer Cruise

EX1604 as a part of the mission to explore the Pacific Remote Islands Marine National Monument (PRIMNM). This mission was part of the Campaign to Address Pacific monument Science, Technology, and Ocean NEeds (CAPSTONE), a major multi-year foundational science effort focused on providing public data and information about the poorly studied deep-water areas of U.S. marine protected areas in the central and western Pacific. The exploration is providing critical information relevant to emerging regional issues like understanding deep-sea ecosystems that could be threatened by activities such as deep-sea mining in unprotected areas. Wilmelie Cruz was a volunteer aboard the NOAA Ship Okeanos Explorer as she worked on similar projects surveying the habitats surrounding the Marianas Trench Marine National Monument which is located in the Mariana Archipelago east of the Philippines.

At the end of summer we are looking forward to reaching out to our local community by setting up an informational booth at Salisbury's Third Friday events promoting our student subunit amongst local artists and vendors. We will be playing species identification games featuring local marine fauna and flora. Additionally, we'll make ourselves available for inquiry regarding our educational outreach programs! We are looking forward future volunteer opportunities during the second half of the year.

AFS Tidewater Chapter Executive Committee

President: Rob Aguilar

President-Elect/ Program Committee

Chair: Sally Roman

Past President/ Nominating Committee

Chair: Scott Baker

Treasurer/ Secretary: Stephanie McInerny

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North Carolina: Jacob Boyd

Virginia: Willy Goldsmith

Maryland: Bob Murphy

Student Subunit Presidents

Duke: Kelsey Dick

ECU: Nick Tolopka & Zach Gillum

UMCES CBL: Emily Liljestrand

UMES: Noelle Olsen

UNCW: inactive

Awards & Scholarship Committee Chair:

Sara Mirabilio

Webmaster: Chad Smith

Newsletter Editor: Laura Lee

2016 AFS Annual Meeting Heads to Kansas City!

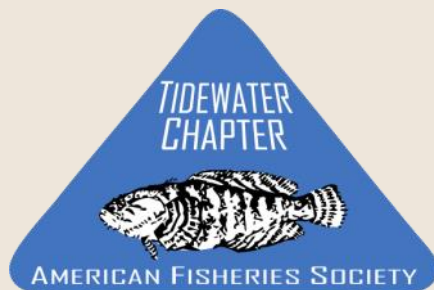
The Missouri Chapter and North Central Division of the American Fisheries Society invite you to attend the 146th AFS Annual Meeting in Kansas City, August 21-25, 2016. This year's theme is: *Fisheries Conservation and Management: Making Connections and Building Partnerships*.

The 2016 Annual Meeting offers a chance to present your science to experts from around the world, enhance your job skills with hands-on Continuing Education Workshops, see the latest technology in the Trade Show, and network with colleagues old and new. This year's hotel and conference center are all under one roof at the Sheraton Kansas City at the Crown Center, giving you more free time to see presentations, meet with collaborators, and explore the city. And Kansas City's affordable, central location, combined with its thriving arts culture, nightlife, and stunning natural resources, means that there is something for everyone to enjoy in August 2016!



Visit <http://2016.fisheries.org> for more information.

*Get updates via the Chapter **LISTSERV***



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