



ASMFC

FISHERIES *focus*

Vision: Sustainable and Cooperative Management of Atlantic Coastal Fisheries

INSIDE THIS ISSUE

Upcoming Meetings
page 2

From the Executive Director's Desk
In Memoriam: Willard "Bill" Cole
page 3

Species Profile
Atlantic Herring
page 4

Fishery Management Actions & Stock Assessment Results
Atlantic Cobia
Atlantic Sturgeon
River Herring
page 6

SciFish
Citizen Science Powered by ACCSP
page 8

Science Highlight
Understanding Fish Maturity
page 9

Comings & Goings
page 10

Employee of the Quarter
page 11

American Lobster Board Initiates Addendum to Postpone Implementation of Changes to Gulf of Maine Gauge and Escape Vent Measures

The Commission's American Lobster Management Board initiated Draft Addendum XXXI to Amendment 3 to the Interstate Fishery Management Plan for American Lobster. The Draft Addendum will consider postponing the implementation of the measures from Addendum XXVII. The Board also approved Addendum XXX, which addresses how the measures of Addendum XXVII will apply to foreign imports of American lobster once implemented.

Draft Addendum XXXI considers postponing the implementation of management measures under Sections 3.1 and 3.2 of Addendum XXVII until July 1, 2025. Addendum XXVII was adopted in May 2023 and established a trigger mechanism to automatically implement management measures to provide additional protection of the Gulf of Maine/Georges Bank (GOM/GBK) spawning stock biomass. Changes to the current gauge and escape vent sizes in Lobster Conservation Management Areas (LCMAs) 1, 3, and Outer Cape Cod (OCC) were triggered based on observed changes in recruit abundance indices in October 2023 with the inclusion of 2022 survey data in the trigger index. The Board then extended the implementation date of the series of changes to gauge and vent size to begin January 1, 2025 to allow the Gulf of Maine states the opportunity to coordinate with Canada regarding possible trade implications, and give the industry and gauge makers additional time to prepare for these changes.

A meeting was held between US and Canadian lobster fishery managers and industry members in June 2024 to discuss the management structures and stock assessments of the two countries. Based on this meeting, the Board determined that postponing implementation of Addendum XXVII's biological measures to July 1, 2025 would reduce negative impacts to the US and Canadian lobster industries in 2025 and allow Canada more time to consider implementing complementary management measures. Specifically, Draft Addendum XXXI will consider postponing the changes in minimum gauge size for LCMA 1 (inshore Gulf of Maine), and the measures under Section 3.1 of Addendum XXVII to create a common size limit for state-only and federal permit holders fishing in OCC to July 2025. The Draft Addendum will not consider postponing regulations prohibiting the issuance of 10% additional trap tags in Areas 1 and 3 above the trap limit or allocation. Draft Addendum XXXI will be released for public comment later this year.

The Board also approved Addendum XXX, which clarifies the Commission's intent for how the measures of Addendum XXVII will apply to foreign imports of American lobster once implemented. The Addendum recommends to NOAA Fisheries that the Mitchell Provision of the Magnuson-Stevens Act apply to foreign imports of whole live lobster, meaning the smallest minimum size for foreign imports would match the smallest minimum size in effect for the US industry. The current smallest LCMA minimum gauge size in effect is 3¾ inches, and when the LCMA 1 gauge size increases, this will change to 3 5/16 inches. Foreign imports smaller than the new minimum gauge size would be prohibited. These size restrictions do not apply to lobsters travelling in-bond through the US. Addendum XXX is available at https://www.asmfc.org/uploads/file/66bb8d55AmLobster_AddendumXXX_August2024.pdf.

Upcoming Meetings

The Atlantic States Marine Fisheries Commission was formed by the 15 Atlantic coastal states in 1942 for the promotion and protection of coastal fishery resources. The Commission serves as the deliberative body of the Atlantic coastal states, coordinating the conservation and management of nearshore fishery resources, including marine, shell and diadromous species. The fifteen member states of the Commission are: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and Florida.

Atlantic States Marine Fisheries Commission

Joseph Cimino (NJ), Chair
Dan McKiernan (MA), Vice-Chair

Robert E. Beal,
Executive Director

Patrick A. Campfield,
Science Director

Toni Kerns,
Fisheries Policy Director

Laura C. Leach,
Director of Finance & Administration

Geoff White,
ACCSP Director

Tina L. Berger, Editor
Director of Communications
tberger@asmfc.org

703.842.0740 Phone
www.asmfc.org
info@asmfc.org

September 3 (9 - 10 AM)

Red Drum technical Committee; for more details, visit <https://asmfc.org/calendar/9/2024/Red-Drum-Technical-Committee/2372>

September 3 (1 - 3:30 PM)

Atlantic Striped Bass Release Mortality Work Group; for more details, visit <https://asmfc.org/calendar/9/2024/Atlantic-Striped-Bass-Release-Mortality-Work-Group/2379>

September 4 (begins at 1 PM) - 5 (ends at Noon)

Atlantic Striped Bass Technical Committee, ASMFC, 1050 North Highland Street, Suite 200 A-N, Arlington, VA

September 12 (1 - 3:30 PM)

Atlantic Striped Bass Release Mortality Work Group; for more details, visit <https://asmfc.org/calendar/9/2024/Atlantic-Striped-Bass-Release-Mortality-Work-Group/2380>

September 13 (9 - 11 AM)

Horseshoe Crab Adaptive Resource Management Subcommittee and Delaware Bay Ecosystem Technical Committee; for more details, visit <https://asmfc.org/calendar/9/2024/Horseshoe-Crab-ARM-Subcommittee-and-Delaware-Bay-Ecosystem-Technical-Committee-/2377>

September 16 - 20

South Atlantic Fishery Management Council, Town & Country Inn and Suites 2008 Savannah Highway Charleston, SC; for more details, visit <https://safmc.net/events/september-2024-council-meeting/>

September 20 (9:30 AM - Noon)

Atlantic Striped Bass Release Mortality Work Group; for more details, visit <https://asmfc.org/calendar/9/2024/Atlantic-Striped-Bass-Release-Mortality-Work-Group/2381>

September 24 (9 - 10:30 AM)

Red Drum Technical Committee; for more details, visit <https://asmfc.org/calendar/9/2024/Red-Drum-Technical-Committee/2373>

September 24 (9:30 AM - Noon)

Atlantic Striped Bass Release Mortality Work Group; for more details, visit <https://asmfc.org/calendar/9/2024/Atlantic-Striped-Bass-Release-Mortality-Work-Group/2382>

September 24 - 26

New England Fishery Management Council, Beauport Hotel, Gloucester, MA; for more details, visit <https://www.nefmc.org/calendar/september-2024-council-meeting>

September 25 (10 AM - Noon)

Atlantic Menhaden Stock Assessment Subcommittee; for more details, visit <https://asmfc.org/calendar/9/2024/Atlantic-Menhaden-Stock-Assessment-Subcommittee/2353>

October 3 (10 AM - Noon)

Sciaenids Management Board; for more details, visit <https://asmfc.org/calendar/10/2024/Sciaenids-Management-Board/2376>

October 8 - 10

Mid-Atlantic Fishery Management Council, Hyatt Place Dewey Beach, 1301 Coastal Highway, Dewey Beach, DE; for more details, visit <https://www.mafmc.org/council-events/2024/october-council-meeting>

In Memoriam: Willard "Bill" Cole

On June 28th, 2024, Willard "Bill" Cole, a longtime participant and steadfast supporter of the Atlantic States Marine Fisheries Commission, passed away. For those of you who didn't know Bill, he was a legend in the realm of fisheries management and science, who was dedicated to the protection, restoration, and conservation of fisheries resources and their habitats along the Atlantic coast.

I knew Bill for nearly 25 years. He was one of the first people to greet me when I came to my first Commission meeting. He pulled me aside, shook my hand, and told me with his typical whisper in my ear how glad he was to meet me and that if I ever needed anything, he was my guy. Of note, I was not the first Commission staff member that Bill greeted that way nor was I among the last; he was a mentor and advisor to dozens of staff over the years.

Having been a state, university, and federal fishery manager and scientist over his 40-year career, Bill had a vast institutional knowledge of the Commission, our managed species, and the people around the table making management decisions. Bill not only shared what he knew with new employees, but more importantly who he knew and where they stood on certain key issues. For many staff, he was the first point of introduction to our commissioners and federal partner representatives.

Bill spent the majority of his career with the US Fish and Wildlife Service (USFWS), where he served in different capacities and numerous offices from North Carolina, to New York, DC, Texas, and New Mexico. In each place he left an indelible mark – serving on review teams for the first Everglades study; developing the Navigable Waters Handbook; protecting riverine, wetland, and coastal habitats in Long Island Sound, the Hudson River and St. Lawrence Seaway; and establishing what ultimately would become the USFWS South Atlantic Fish and Wildlife Conservation Office. While with the South Atlantic Office, he worked closely with the State of North Carolina to restore anadromous fishery resources throughout the Albemarle and Pamlico Sounds, once the site of the largest commercial

American shad and river herring fisheries on the East Coast.

Bill understood early on that management of fishery resources in North Carolina required participation in regional fishery management institutions as well. As such, he became involved with both the South Atlantic Fishery Management Council and the Commission, as the Southeast Regional Director's designee for both institutions. He served in that capacity continuously for 19 years. Upon Bill's retirement from USFWS, he served as the North Carolina Governor's Appointee to the ASMFC from 2008-2015. In 2015, Bill received the Commission's most prestigious award - the Captain David H. Hart Award -- for his longstanding contributions to fisheries management, science, and data collection.

Along with several colleagues, Bill conceived the Cooperative Winter Tagging Cruise off North Carolina and Virginia. The Cruise was designed to tag striped bass in a mixed stock of migratory fish wintering off the North Carolina Outer Banks and southern Virginia as a part of the Commission's Atlantic migratory striped bass management program. The Cruise is one of the longest time series of any such coastal tagging program, as well as one of the most successful federal, state, and academic partnerships. Bill served as Chief Scientist on all but two of the cruises during an 18-year period. Over the years tagging of additional ASMFC- and Council-managed species has been added to the Cruise protocol, providing even more valuable data for fisheries management.

Bill was a charter member of the Atlantic Coastal Cooperative Statistics Program Operations Committee and an ardent supporter of ACCSP since its inception; he worked tirelessly with federal and state partners to advance the program toward its mission. years.

Bill characterized himself as a "biopolitician," whose contributions to the management of US East Coast fisheries goes well beyond his many notable accomplishments. Bill was a true friend and mentor to many in our fisheries management community and we are deeply indebted to him. Rest in peace, Bill.



Bill's contributions to the management of US East Coast fisheries goes well beyond his many notable accomplishments. Bill was a true friend and mentor to many in our fisheries management community and we are deeply indebted to him.

Species Profile: Atlantic Herring

Latest Stock Assessment Update to Inform Annual Catch Limits Amid Rebuilding Plan

Introduction

The 2024 federal Management Track Assessment found Atlantic herring continue to be overfished but are not experiencing overfishing. Since 2022, the Atlantic herring stock has been under a rebuilding plan implemented through the New England Fishery Management Council's (Council) Atlantic Herring Fishery Management Plan (FMP).

The stock rebuilding plan has resulted in very low annual catch limits in recent years, especially in 2021 and 2022. Managers are working to rebuild the stock while also facing very low stock recruitment the past several years. Low catch limits impact vessels that harvest Atlantic herring as well as fisheries that rely on Atlantic herring as an important source of bait, such as American lobster, blue crab, tuna, and striped bass fisheries. Annual catch limits for 2025-2027 will be considered in the coming months, taking into account the results of the most recent stock assessment, stock projections, and the rebuilding plan. The recommended annual catch limit for 2025 would be a large reduction from the current annual catch limit, and will be considered at the Council and Commission meetings in September and October 2024, respectively.

Life History

Atlantic herring are one of 200 species in the clupeid family, which includes menhaden, shad, and river herring. The species inhabits US coastal waters from Cape Hatteras, North Carolina, through Labrador, Canada, and off the coast of Europe. Herring form the base of the food web as a forage species for many animals, from starfish and whelk to economically important fish such as haddock, cod, and flounder. Even the vast amount of eggs produced during spawning events serve as an important protein source for marine mammals, seabirds, and many fishes throughout the Mid-Atlantic and Northeast.

The species' entire life cycle occurs in the ocean and is closely associated with plankton. After hatching, the larvae drift passively along coastal currents, consuming eggs and larvae of copepods, barnacles, and other invertebrates. After the larvae herring metamorphose into juveniles (called sardines), they begin to gather in schools inhabiting shallow, inshore waters during the warmer months of the year. As they grow into adults, herring continue to feed on plankton. Feeding behavior consists of nightly vertical migrations following the zooplankton that inhabit deep waters by day and surface waters by night. Adults (age three and older) migrate south from summer/fall spawning grounds in the Gulf of Maine and Georges Bank to spend the winter in Southern New England and the Mid-Atlantic.

Herring spawn as early as August in Nova Scotia and eastern Maine, and during October and November in the southern Gulf of Maine, Georges Bank, and Nantucket Shoals. When temperatures are ideal, the ripe adult herring aggregate in massive shoals over habitats consisting of rock, gravel, or sand bottoms ranging from 50-150 feet deep. A single mature female can produce between 30,000 and 200,000 eggs in one spawning event. Schools can produce so many eggs the ocean bottom is covered in a dense carpet of eggs several centimeters thick. Eggs hatch in 10-12 days depending on water temperature.

Commercial Fisheries

The earliest herring fisheries in North America date back 450 years. Today, Atlantic herring is predominantly a commercially-caught species with markets in the US and Canada. The most common gears used to catch Atlantic herring are trawls (midwater and bottom) and purse seines. A small fixed-gear fishery continues primarily in Maine.

Catch increased in the 1960s, largely due to a foreign fishery which developed on Georges Bank. US commercial landings in the 2000s

Species Snapshot



Atlantic Herring *Clupea harengus*

Management Unit: Maine through New Jersey

Common Names: Common Names: Sea herring, sardine, sild, common herring, Labrador herring, sperling

Interesting Facts

- Atlantic herring and other clupeid fish have exceptional hearing. They can detect sound frequencies up to 40 kilohertz, beyond the range of most fish. This allows schooling fish to communicate while avoiding detection by predatory fish.
- According to a 2003 National Geographic study, some types of herring pass gas to "speak" to each other without alerting other fish. The bubbles that emanate make a high-frequency sound only audible to herring.
- Fresh herring bait is considered premium product and demands the highest prices.
- Fresh herring, prized for its delicate off-white, soft meat, can be found in select high-end restaurants and fish shops. Herring is most often canned, pickled, or smoked. The flavor varies with size - smaller herring offer a more subtle taste, whereas larger ones are known for their oilier, more pungent flavor.

Age/Length at Maturity: 3 years/9 inches

Stock Status

- Overfished but not experiencing overfishing

continued on next page

were fairly stable, ranging between about 130 and 250 million pounds per year. Since 2013, commercial landings have generally decreased and reached the lowest levels of the time series in 2021 and 2022 at below 12 million pounds each year. US commercial landings in 2023 increased to about 23 million pounds, primarily due to more quota being available in 2023 informed by the 2022 stock assessment projections.

The herring resource was once primarily used for the canning industry, but now provides bait for important fisheries such as lobster, blue crab, tuna, and striped bass. The fish are also a valued commodity overseas where they are frozen and salted.

Stock Status

A 2024 Management Track Assessment (i.e., assessment update) was completed by NOAA's Northeast Fisheries Science Center and is an update to the 2022 Management Track Assessment using the age-structured assessment model (ASAP) from the 2018 benchmark stock assessment.

The 2024 assessment, which includes data through 2023, indicates the Atlantic herring stock is overfished but not experiencing overfishing based on the biological reference points for spawning stock biomass (SSB) and fishing mortality. SSB has been declining since 2014 and was estimated to be 47,955 metric tons in 2023, well below the SSB target of 186,367 metric tons. Fishing mortality was estimated to be 0.263 in 2023, also well below the overfishing threshold of 0.45. Both the 2022 and 2024 assessments noted several years of poor recruitment and the difficulty of identifying a reason for this recruitment trend.

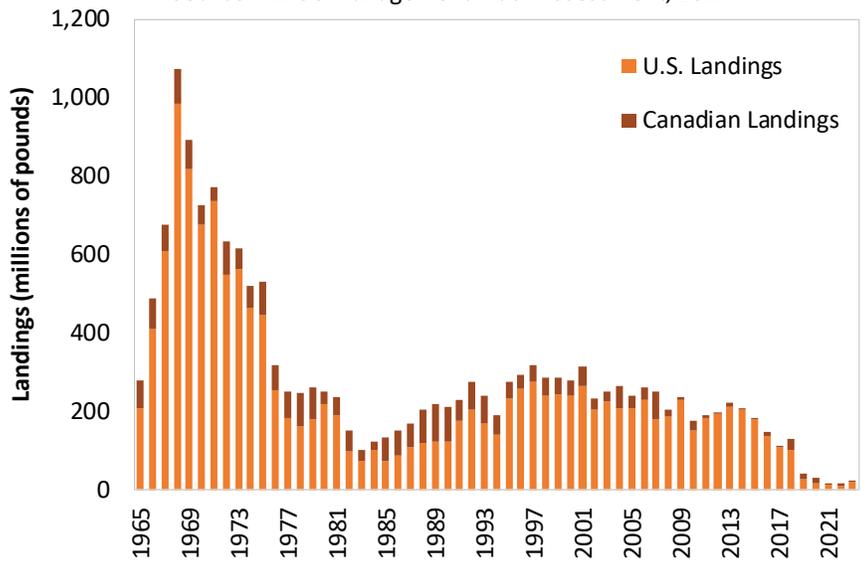
Atlantic Coastal Management

Because herring can be found in state and federal waters, there are complementary management plans between the Commission and the Council which set annual quotas, called annual catch limits (ACL), for four management areas: Area 1A (Inshore Gulf of Maine), Area 1B (Offshore Gulf of Maine), Area 2 (South Coastal Area), and Area 3 (Georges Bank). The ACLs are set based on the maximum sustainable yield that allows for a sustainable harvest but leaves enough herring for fish, birds, and marine mammals.

The Commission manages Atlantic herring under Amendment 3 to the Interstate FMP and Addenda I and II. The Commission implements specific management measures for Area 1A (inshore Gulf of Maine), including measures to control the timing of effort. Days out is the primary effort control measure for the Area 1A fishery. Managers are able to extend the fishery by controlling

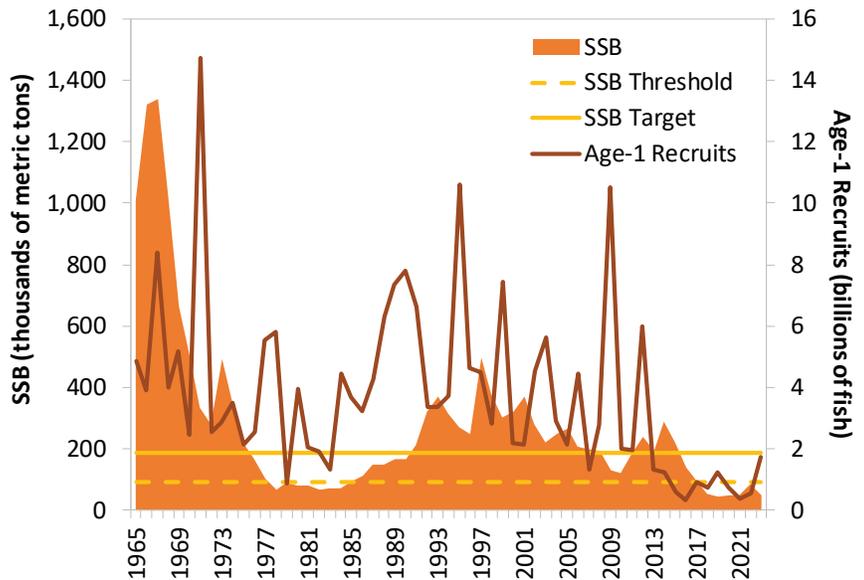
Atlantic Herring Landings

Source: NEFSC Management Track Assessment, 2024



Atlantic Herring Spawning Stock Biomass and Recruitment

Source: NEFSC Management Track Assessment, 2024



fishing days through landing restrictions. The goal is to provide a consistent supply of herring to the market by controlling landings, particularly during the summer when herring may be localized in Area 1A and there is peak bait demand. The FMP also allows for seasonal allocation of the Area 1A quota. Since 2020, the seasonal allocation of the Area 1A sub-ACL has been 72.8% available for Season 1 (June-September) and 27.2% available for Season 2 (October-December).

continued on next page

Fishery Management Actions & Stock Assessment Results

Atlantic Cobia

The Coastal Pelagics Management Board approved Addendum II to Amendment 1 to the Interstate Fishery Management Plan for Atlantic Cobia. The Addendum modifies the recreational allocation framework, allows the Board to update allocations quickly if the underlying data are revised, expands the range of data used in harvest evaluations, and allows the Board to set management measures for a longer period of time. Addendum II responds to increased cobia harvest in some Mid-Atlantic states in recent years, as well as concerns about high uncertainty associated with cobia recreational harvest estimates. All Addendum II measures are effective immediately, and will be used to set recreational measures for 2025 and beyond.

Addendum II changes both the geographic scope of the recreational allocation framework and the timeframe of data used as the basis for allocations. The Addendum changes the allocation framework from a state-by-state to a regional framework, with a northern region of Rhode Island through Virginia and a southern region of North

Carolina through Georgia. The new regional allocation framework is intended to reduce uncertainty by using harvest estimates based on a larger sample size combining multiple states in a region, instead of individual state-level harvest estimates.

Each region is allocated part of the recreational quota based on each region's percentage of the coastwide harvest in number of fish over the last ten years, combining 50% of 2014-2023 data and 50% of 2018-2023 data. Data from 2016 and 2017 are excluded due to fishery closures during those years, and data from 2020 are excluded due to COVID-19 impacts on recreational data collection. Using more recent data, as compared to previously using 2006-2015 data, accounts for changes in harvest and potential range expansion of the species in recent years.

There is a possibility that the recreational harvest estimates could be revised in the future by NOAA Fisheries, which would affect the percent allocations for each region. If the harvest estimates are revised, Addendum II allows the Board to quickly

update the percent allocations via Board vote to reflect any revisions to the data used to establish the allocations.

Each region's percent allocation is applied to the coastwide recreational quota (currently 76,908 fish) to determine the regional harvest targets in number of fish. When a region's harvest is compared to its target, Addendum II specifies that a rolling average of up to five years of harvest data under the same management measures will be compared to the target, instead of limiting it to a three-year average. This allows for inclusion of two additional data years to account for the variability and uncertainty of cobia harvest estimates from year to year.

Finally, Addendum II allows the Board to set specifications (e.g., coastwide total harvest quota) via Board action for up to five years, which is a longer time period than the current three years. Setting management measures for a longer period of time is intended to align management action with the availability of new stock assessment information.

continued on next page

ATLANTIC HERRING SPECIES PROFILE, continued from page 5

The FMP also implements spawning closures in Area 1A for the three inshore Atlantic herring spawning areas off eastern Maine, western Maine, and Massachusetts-New Hampshire that may begin on the default dates of August 28, September 23 and September 23, respectively. If sufficient biological samples of Atlantic herring are available, the dates of closures are determined using the gonadosomatic Index (GSI) forecast system, which tracks reproductive maturity to align the timing of spawning area closures with the onset of spawning. In recent years, there have not been enough samples available to use the GSI forecast system, so the three spawning closures have begun on the above default dates.

Upcoming management actions include the Council's and Commission's consideration of specifications for the 2025-2027 fishing years, taking into account the results of the 2024 stock assessment, projections, and the rebuilding plan. The Council will also be developing management alternatives for Amendment 10 to the Federal FMP over the next several months, intended to minimize user conflicts, contribute to optimum yield, and support rebuilding of Atlantic herring; and enhance river herring and shad avoidance and catch reduction. For more information, please contact Emilie Franke, Fishery Management Plan Coordinator, at efranke@asmfc.org.



Addendum II will be available in late August on the Commission website at <http://www.asmfc.org/species/cobia> under Management Plans and FMP Reviews.

For more information, please contact Emilie Franke, Fishery Management Plan Coordinator, at efranke@asmfc.org or 703.842.0740.

Atlantic Sturgeon

The Atlantic Sturgeon Stock Assessment Update finds that while the coastwide population remains depleted relative to historic levels, the population has shown signs of improvement with a significant positive trend over the time series. Further, there is a high probability that abundance in 2022 was greater than abundance in 1998 at the start of the coastwide moratorium. Total mortality is low and has a low probability of exceeding its reference point. Depleted status is used instead of overfished because many factors (such as bycatch, habitat loss and ship strikes), not just directed historical fishing, have contributed to the continued low abundance of Atlantic sturgeon.

At the individual distinct population segment (DPS) level, results were mixed. Most indices showed either a positive trend or no significant trend over the time series. The average probability that the New York Bight and Carolina DPSs indices were greater than the reference year was high, meaning it was likely that abundance in 2022 was higher than it was at the start of the moratorium. For the Gulf of Maine, Chesapeake Bay, and South Atlantic DPSs, the average probability was lower – less than 50% for all three DPSs – meaning that it was unlikely that abundance in 2022 was greater than it was at the start of the moratorium. Total mortality estimates for each DPS were higher than for the full coastwide population and the probability of exceeding the reference point was higher,



(c) Keith Ellenbogen

partly due to the smaller sample size and higher uncertainty in the tagging model at the DPS level than at the coastwide level. For the Gulf of Maine DPS there was a greater than 50% chance that total mortality exceeded the reference point, while there was a lower probability that total mortality exceeded the reference point for the other DPSs.

Atlantic sturgeon are a challenging species to assess because datasets for this species are limited. However, progress has been made on research recommendations addressing questions about genetics, life history, abundance, and sources of mortality, and work will continue to develop better datasets to support the next benchmark assessment in 2028.

No management action was taken given the continued coastwide harvest moratorium and protection under the federal Endangered Species Act. Additionally, efforts are being taken to reduce sturgeon bycatch in other directed fisheries. In April, the Mid-Atlantic and New England Fishery Management Councils recommended their preferred alternative to NOAA Fisheries to reduce sturgeon bycatch in the federal monkfish and spiny dogfish fisheries, and a final rule is expected by the end of 2024. The Commission's Spiny Dogfish Management Board also initiated an addendum to develop options to maintain

consistency with the federal action for state-permitted spiny dogfish harvesters in state waters, with the goal of reducing sturgeon bycatch.

A more detailed description of the stock assessment results can be found [here](#). The Stock Assessment Update can be found [here](#). For more information, please contact James Boyle, Fishery Management Plan Coordinator, at jboyle@asmfc.org.

River Herring

The River Herring Benchmark Stock Assessment finds the coastwide populations of both alewife and blueback herring (collectively referred to as river herring) are depleted relative to historic levels, with the habitat model indicating that overall productivity of both species is lower than an unfished population before the occurrence of any habitat modifications (e.g., dams or human alterations to the environment). The depleted determination was used instead of overfished and overfishing because of the many factors that have contributed to the declining abundance of river herring, which include not just directed and incidental fishing, but also habitat loss, predation, and climate change.

In terms of recent trends, there is no clear signal for either species across the coast. Even within the genetic stock-regions, trends in abundance and mortality differed from river to river, with some rivers showing increasing trends and low mortality rates, and others showing flat or declining trends and total mortality rates above the reference point. Although very few significant trends overall were detected since the adoption of Amendment 2 in 2009, the majority of indices of abundance for both alewife and blueback herring are likely to be higher now than they were

continued on next page

in 2009. However, half of the blueback populations and 65% of the alewife populations have a high probability of being above the total mortality reference point, indicating total mortality on adult fish is too high. Total mortality is the removal of fish from a population due to both fishing and natural causes.

The northern New England region has shown more positive trends and a higher likelihood that recent abundance levels are greater than those in 2009. It is unclear why that is the case, especially as the more northern regions also have higher probabilities of being above the total mortality reference point. States in the northern New England region have conducted extensive habitat restoration and dam removal, but so have states further south, and they have not seen the same degree of positive trends in run counts and indices. In addition, states in the northern stock-region have also accounted for the majority of directed catch in recent years, while states in the Mid-New England, Southern New England, and Mid-Atlantic stock-regions have closed

their fisheries. Genetic analysis indicates most of the ocean bycatch around Cape Cod and Long Island Sound was of alewife from the Southern New England stock-region and blueback herring from the Mid-Atlantic stock-region, two areas that have had more negative trends in recent years despite habitat restoration efforts and directed fishery closures.

The assessment includes two proof-of-concept approaches to develop biologically-based caps on bycatch in ocean fisheries. The data-limited methods produced estimates of bycatch caps that were lower than the current coastwide bycatch estimates and lower than the current caps in the Atlantic herring and Atlantic mackerel fishery. However, more work needs to be done on the data-limited bycatch cap approach, including consulting with the Mid-Atlantic and New England Fishery Management Councils on risk levels and how to implement species-specific caps in fisheries where the bycatch monitoring includes American and hickory shad as well as river herring. The assessment also recommended exploring

species distribution modeling to identify hot spots of river herring bycatch that could be avoided with time-area closures as an alternative or complement to in-season monitoring of river herring bycatch.

No management action was taken given the continued coastwide harvest moratorium for states without an approved Sustainable Fishery Management Plan, as required by Amendment 2. Additionally, the New England Fishery Management Council is early in the process of drafting Amendment 10 to the Atlantic Herring Fishery Management Plan, which is proposing the development of measures to reduce river herring bycatch in the federal fishery.

A more detailed description of the stock assessment results can be found [here](#). The Benchmark Stock Assessment and Peer Review Report will be available on the [Shad & River Herring webpage](#). For more information, please contact James Boyle, Fishery Management Plan Coordinator, at jboyle@asmfc.org.



SciFish: Citizen Science Powered by ACCSP

ACCSP is excited to announce the launch of SciFish! Partners are initially required to submit a short application for their proposed citizen science project. There are two rounds of pre-applications prior to the full application deadline. The upcoming pre-application deadlines are October 1, 2024, and December 1, 2024, with the full application due by February 1, 2025.

SciFish is a new mobile application that allows the public to participate in scientific research by collecting and sharing data on Atlantic coast fisheries. This app standardizes the collection of citizen science data from Atlantic coast fisheries by providing a single platform for multiple data collection projects. The project builder allows researchers to create new data collection projects with minimal resources. Projects developed in SciFish will focus on collecting data for marine and/or diadromous fisheries along the Atlantic coast. The projects will help address current data gaps and research needs, clearly explain how collected data will be used in management and stock assessments, and encourage collaboration between scientists and fishermen.

Projects developed in the SciFish platform must have an ACCSP partner as a principal investigator or be sponsored by an ACCSP partner. Partner sponsors must provide a letter of support explaining the project's value, how the collected data will be used, and a plan to monitor progress. Sponsorship allows partners to endorse/support a SciFish project that contributes to fisheries management. Whether principal investigators are from an ACCSP partner or sponsored by one, all must submit applications to develop a citizen science project within the SciFish platform and are responsible for acquiring funding for their projects. Project approval provides access to the SciFish platform, but does not include monetary support from ACCSP.

The SciFish application process has multiple steps, including pre- and full application submissions and reviews. The timeline for these steps is below. More information, including the full policy document that has templates for pre- and full applications can be found on the SciFish page of the ACCSP website at <https://www.accsp.org/what-we-do/scifish/>.

Science Highlight: Understanding Fish Maturity

Amid the heat wave of early July, several state scientists from the Northeast Area Monitoring and Assessment Program (NEAMAP) and the Southeast Area Monitoring and Assessment Program (SEAMAP) were huddled around metal tables and plastic trays filled with dissected fish. The species represented included everything from spiny dogfish to striped bass to winter and summer flounder.

Classifying fish by age requires experience, and with proper training and resources, researchers can gather data that are invaluable for fisheries management. Determining the maturity of the sample fish caught through state survey programs is a critical step in effectively managing individual stocks. By having sex and maturity data, researchers can better determine variability in spawning location, the timing of spawning, changes with size at maturity, and estimates of spawning stock biomass. After the samples have been processed and the data analyzed, this information can be used to inform models that can both look at peaks and drops in species abundance and also help estimate future trends based on factors like the ratio of males to females and the number of juveniles versus sexually-mature and spawning fish. Sex and maturity data are also useful to fisheries managers, who can use current analyses and model projections to best determine how to more effectively manage the species to ensure that the fishery remains a long-term resource for generations to come.

Size and age-at-maturity can vary based on environment and fishing pressure, so long-term monitoring of fish maturity is necessary to properly assess changes in stock biomass over time. Several states including Rhode Island, New Jersey, Maryland, Virginia, North Carolina, and South Carolina collect or have previously collected maturity data for the fish caught in their survey programs, and almost all states collect at least sex data for their economically important species to help better inform the fishery.

However, determining the sex and maturity of fish is not easy unless they're fully mature and running—a term commonly used for when fish are close to spawning so their eggs or milt may often start to release when caught. For juveniles and fish that are developing or resting between cycles, determining their sex and maturity requires more work than just catching them. During each NEAMAP and SEAMAP survey, a small number of fish per season are sacrificed to collect this and other valuable life history data. For sex and maturity data, these fish are then dissected so that researchers can better examine their gonadal structures.

In the case of fish like spiny dogfish and other elasmobranchs, determining the sex and maturity is easy since the males have external claspers that only fully form when they are ready to reproduce, but for most other types of fish, the distinction is not as clear. For example, for herrings, flounders, and many other priority species, it is difficult to distinguish a “resting” phase from a “developing” phase. During juvenile development and between spawning cycles of fully mature female, their ovaries will look yellow-orange but have no eggs.



Scientists inspect fish specimens as part of the NEAMAP/SEAMAP Maturity Workshop held in July. All photos (c) Jainita Patel, ASMFC

continued on next page

COMMISSIONERS



SENATOR J.D. "DANNY" DIGGS

In July, Senator Danny Diggs became the Commonwealth of Virginia's Legislative Appointee to ASMFC. Senator Diggs represents Virginia's 24th District and serves on the Transportation, Local Government, and Privileges & Elections Committees.

Before being elected to the Virginia Senate, Senator Diggs was the Sheriff of York County and the City of Poquoson, serving in this position from 2000-2023. His education and training include holding a degree in Police Science and graduating from the prestigious FBI National Academy, as well as numerous other local, state, and federal law enforcement training programs.

He is active in the local community and has served on the Board of Directors for several non-profit groups including the York County Boys and Girls Club, the York County Chamber of Commerce, and the York-Poquoson Chapter of the American Red Cross. He is also a member of the Kiwanis Club of Grafton.

Born and raised in Poquoson, Senator Diggs now lives in the Seaford area of York County. He is married, with two children and four grandchildren. Please join us in welcoming Senator Diggs to the Commission.

JAMES "JJ" MINOR

Also in July, James "JJ" Minor became the Commonwealth of Virginia's Governor Appointee to ASMFC, replacing Bryan Plumlee who served in that position since 2018. JJ Minor is a Management Analyst for the City of Richmond, President of Richmond Virginia Branch of the National Association for the Advancement of Colored People, and board member of the Help Me Help You Foundation. An avid recreational angler, JJ Minor served two terms on the Virginia Marine Resources Commission, where he chaired the Commercial Fishing Advisory Board. Please join us in welcoming JJ Minor and thanking Bryan for his dedication and service to the Commission.

SCIENCE HIGHLIGHT, continued from page 9

There are many maturity classification systems that treat these as separate stages, but because it can be hard to determine without a histological analysis, the classification system developed by the Virginia Institute of Marine Science (VIMS) chooses to treat these two stages as one to both increase accuracy and the speed of training.

Outside of the VIMS classification system, another commonly used protocol is one developed by the Northeast Fisheries Science Center (NEFSC). However, even if a survey does not have staff trained in the VIMS system or the NEFSC system, most will at least collect basic sex (i.e., unknown, male, female) and maturity (i.e., mature or immature) data for their most important species.

To discuss how to best determine sex and maturity for priority species, the NEAMAP Survey Technical Committee in partnership with the VIMS Multispecies Research Group (MRG) held a 2-day July workshop at VIMS. During the workshop, state scientists from across the coast gathered to study samples collected by the NEAMAP Southern New England and Mid-Atlantic Nearshore Trawl Survey and prepared by the MRG. They examined various stages of sexual maturity of species including Atlantic mackerel, Atlantic menhaden, American eels, and striped bass, and learned new methods for how to implement this type of data collection into their own surveys or discussed how the VIMS method differs from their own protocols.

With consistent workshops like these to facilitate discussion or train new skills, the survey programs can ensure that all of the states are able to provide accurate and consistent data outside of just abundance and biomass counts, which can aid in better informed and future-oriented management decisions. For more information, please contact Jainita Patel, Fisheries Science Coordinator, at jpatel@asmfc.org.



Jainita Patel Named Employee of the Quarter

Jainita Patel, Fisheries Science Coordinator, was named Employee of the Quarter (EOQ) for the second quarter of 2024. Having been with the Commission for just over a year and a half, Jainita quickly got up to speed and became a valued member of the Commission staff. This recognition is a testament to Jainita's exceptional dedication, leadership, and significant contributions to several high-profile Commission projects.

Earlier this year, Jainita led the NEAMAP Vessel and Gear Calibration Workshop, playing a critical role in guiding survey programs to collect consistent and high-quality data. In addition to her work with NEAMAP, Jainita took on the challenge of designing and launching a new, modernized SEAMAP website. This project significantly enhanced outreach and visibility for fishery-independent surveys and research in the South Atlantic. The new website serves as a vital resource for stakeholders, providing improved access to important data and information.

Jainita's organizational skills were also on display as she coordinated annual meetings for regional survey programs. These meetings facilitated the development of innovative solutions to common operational challenges and

addressed emerging issues such as offshore wind. Her leadership ensured that these meetings were productive and impactful. Moreover, Jainita provided valuable input to the Ecological Reference Point Work Group, contributing to the integration of new seabird and marine mammal predator data into the assessment.

Through her proactive efforts, Jainita established new partnerships with NOAA Fisheries, fisheries economists along the Atlantic coast, and Commissioners to develop fishery indicators and advance the Risk and Uncertainty Policy. Her ability to collaborate across departments and build strong relationships with stakeholders has been instrumental in these efforts.

Jainita's recognition as Employee of the Quarter highlights her problem-solving abilities, technical expertise, and strong rapport with committee members, all of which have been crucial in advancing the Commission's fisheries science and management goals. As the EOQ recipient, Jainita received a cash award and a letter

of appreciation to be placed in her personal record. In addition, her name is on the EOQ plaque displayed in the Commission's lobby. Congratulations, Jainita!

