

Survey shows average abundance of juvenile striped bass in Virginia waters

October 15 2015



Annual data: Scaled geometric mean of young-of-year striped bass in the primary nursery areas of Virginia (index stations) by year. Vertical bars are ± 2 standard errors of the mean. Horizontal lines indicate the historical arithmetic mean (solid) and confidence intervals (dotted) for 1967-2015. Credit: Mary Fabrizio

Preliminary results from an ongoing long-term survey conducted by researchers at William & Mary's Virginia Institute of Marine Science suggest an average number of young-of-the-year striped bass was produced in Virginia tributaries of Chesapeake Bay in 2015. The 2015 year class represents the group of fish hatched this spring that will grow

to fishable sizes in three to four years.

The program, formally known as the [Juvenile Striped Bass Seine Survey](#), recorded approximately 12 fish per seine haul, which is statistically equivalent to the historic average of about 9 fish per seine haul. This year represents the third consecutive year of average annual recruitment for [striped bass](#) in Virginia waters of Chesapeake Bay. Like many other fishes, striped bass exhibit considerable variation in recruitment from year to year.

Striped bass spawning biomass, a measure of adult fish that return to spawn each spring, is traditionally dominated by a few strong year classes. For instance, striped bass recovery in the mid-1990s was partially attributed to a few strong year classes produced in the late 1980s. Striped bass populations, and the fisheries they support, are stabilized by strong year classes that can mitigate the effect of less-productive years. Although the 2015 year class of striped bass is considered average in terms of abundance, recruitment has been above-average or average in 12 out of the past 13 years, indicating production has been relatively consistent in Virginia nurseries.

Striped bass play an important role as a top predator in the Chesapeake Bay ecosystem and provide value to numerous commercial and recreational anglers. The economic and ecological value of striped bass results in considerable interest in the year-to-year status of the population. By estimating the relative number of young-of-year striped bass, the Juvenile Striped Bass Seine Survey provides an important measure of annual and long-term trends in the bay's striped bass population.

The VIMS Juvenile Striped Bass Seine Survey currently samples 18 stations in the Rappahannock, York and James River watersheds. Biologists sample each site five times from early July through mid-

September of each year. At each site, they deploy a 100-foot seine net from the shore and count and measure every netted fish before returning them to the water. These young striped bass generally measure between 1.5 and 4 inches (40 - 100 mm) long. Survey scientists in Virginia measured 1,883 juvenile striped bass at these stations in 2015. VIMS has been conducting the survey annually since 1967 for the Virginia Marine Resources Commission.

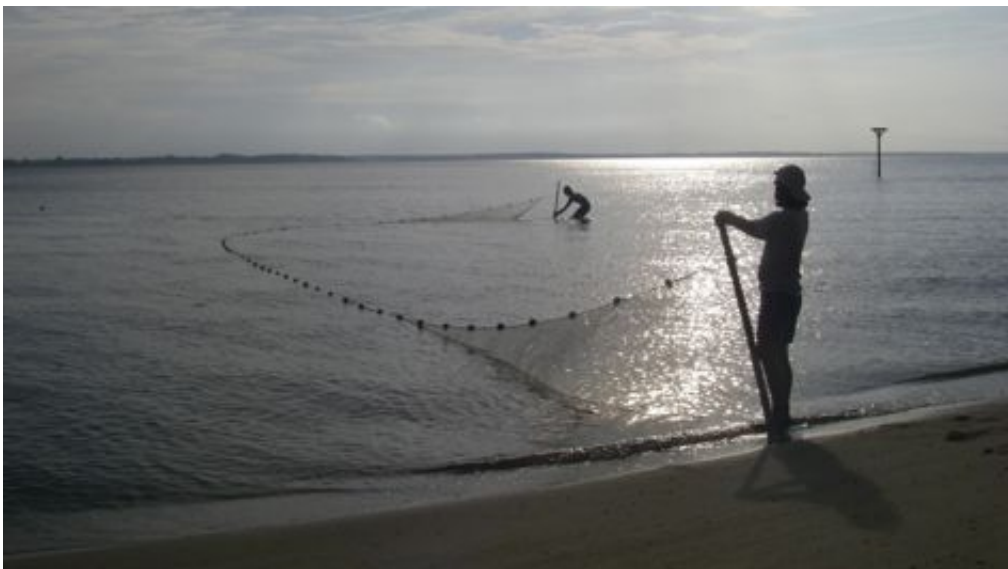


Seine catch: (Left to right) Max Grezlik, Haley Burleson, Jillian Swinford and Brittnee Barris record and measure the catch. Credit: Christopher Davis

The bay's striped bass population has rebounded from historic lows in the late 1970s and early 1980s, following fishing bans enacted in Delaware, Maryland and Virginia in the mid- to late-1980s. Since then, the bay's striped bass population has increased to the point that striped bass are now considered recovered. Monitoring of juvenile striped bass recruitment will continue next year to provide managers with crucial information to sustainably manage this sentinel Bay species.



York River seine: Jillian Swinford (on beach) and Christopher Davis seine local waters as part of the Juvenile Striped Bass Seine Survey. Credit: VIMS photo



Seine net: Bruce Pfirrmann and Anya Voloshin deploy a seine net on the Rappahannock River as part of the Juvenile Striped Bass Seine Survey. Credit: Christopher Davis



Typical catch: A typical catch contains fish such as white perch, striped bass, blue catfish, and gizzard shad. On average, the survey identifies approximately 65 different species of fish per year. This catch is from the James River near Jordan Point. Credit: Leonard Machut

Provided by The College of William & Mary

Citation: Survey shows average abundance of juvenile striped bass in Virginia waters (2015, October 15) retrieved 26 April 2024 from <https://phys.org/news/2015-10-survey-average-abundance-juvenile-striped.html>

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