

Fisheries Ecosystem Assessment Division

Last Month

Summer Fieldwork – Staff sampled nine systems for 2025; Tred Avon River, Magothy River, Mattawoman Creek, Piscataway Creek, West River, Rhode River, Severn River, St. Clements Bay, and Breton Bay. All systems are sampled with beach seines and bottom trawls, except Mattawoman Creek and Piscataway Creek where SAV precludes beach seining. Sampling data are preliminary and subject to change.

Round 4 of summer fieldwork sampling occurred between 8/18 and 8/27. A total of 12,839 fishes and crabs were collected, including 48 species. The top 5 species encountered were Bay Anchovy (3,789), Atlantic Silverside (3,644), Striped Killifish (1,327), Mummichog (767), and juvenile White Perch (410). Thirty-six Young-of-Year (YOY) Striped Bass were caught in beach seines, with a total AM of 1.57 for round 4. As throughout the previous rounds, Tred Avon had by far the highest catch of YOY Striped Bass, with 19 caught in 4 seines (subestuary AM 4.75), and 41 more in the trawl.

Surface water temperatures dropped in late August, with an overall minimum temperature of 24.63°C (St. Clements Bay), maximum of 29.5°C (Tred Avon River), and average temperature of 26.4°C. Bottom dissolved oxygen levels were poor - 21 out of 52 bottom DO readings were below 4 mg/L. Minimum bottom DO was 0.44 mg/L (Severn River), the maximum was 8.5 (West-Rhode Rivers), but the average was 4.05 mg/L. Surface DOs were slightly higher - the minimum was 2.35 mg/L (Severn River), maximum was 8.04 mg/L (Piscataway Creek), and the average was 5.24 mg/L. Five sites were recorded with surface DOs below 4 mg/L - all upper sites in the most developed subestuaries being sampled this year (Severn and Magothy Rivers).

The fifth round of summer sampling was conducted from 9/2 to 9/10. Over 9,200 fishes and crabs were captured in total, comprising 53 species. Trawl catches were down significantly from previous weeks. The most abundant species was Bay Anchovy (3,174), which accounted for 77% of all organisms collected in the trawl. Other most common species were Atlantic Silverside (2,612), Striped Killifish (952), Inland Silverside (274), and juvenile White Perch (273). A total of 18 YOY Striped Bass were captured in the seine, with an overall AM of 0.78. Once again, Tred Avon River dominated the YOY Striped Bass catch, with 15 in the seine and another 30 in the trawl (subestuary AM 3.75).

Water temperatures continued to fall during this sampling period, dropping to a low of 21.98°C (St. Clements Bay). The highest surface temperature recorded was 25.20°C in Tred Avon River, and the average temperature was 23.91°C. Despite lower temperatures, bottom dissolved oxygen remained poor, averaging 4.43 mg/L. The minimum bottom DO was 0.43 mg/L (St. Clements Bay), and the minimums in the Magothy and Severn Rivers, and Breton Bay were all below 1 mg/L as well. Overall, 21 out of 53 bottom DO readings were below 4 mg/L, including all trawls in Breton Bay, Severn River, St. Clements Bay, and 3 of the 4 trawls in Magothy River. Surface DOs fared somewhat better, averaging 6.61 mg/L. The minimum surface DO was 2.10 mg/L (St. Clements Bay), and the maximum was 9.07 (West-Rhode Rivers). Only 3 sites were recorded

with surface DOs below 4 mg/L - all three were in Breton Bay and St. Clements Bay, neighboring systems where DOs remained generally poor during round 5 of sampling.

Round 6 of sampling started on 9/16 and was completed on 9/25. Data are currently being entered and checked.



Severn River beach seining.



Left: Zophia with a Black Crappie from a bottom trawl in Piscataway Creek.

Right: Counting a beach seine from the Magothy River.

YOY Striped Bass Collection - A subsample of Young-of-Year Striped Bass were collected from Tred Avon River over the summer season for study in the fish health lab at the Cooperative Oxford Laboratory.

Federal Aid Report – Staff are finalizing drafts of the 2024 Federal Aid report and scheduled a meeting in October to discuss the 2025 report.

Larval Striped Bass Feeding - All larval Striped Bass samples (or subsamples) have been picked. Larval identification and laboratory diet analysis will continue throughout the fall and winter.

Shallow Water Habitat Workshop – Staff attended the Chesapeake Bay Program Shallow Water Habitat Sentinel Site Program Development Workshop on 9/17-18 to discuss the creation of a sentinel site program in the Chesapeake Bay. Many ideas were thrown around and an additional Workshop will be scheduled around February.

Data Request - Staff received a data request from the Magothy River Association. Data from beach seines for 2003 and 2024 were sent along with additional information on the goals of the sampling for the division. We will also send 2025 data once data checks have been completed.

Guiding Documents for Comprehensive Plans - Staff sent two documents to Watershed and Climate Services. The goal is to get involved at the beginning of the comprehensive plan updates instead of reacting. The documents sent were “Watershed Development Guidelines for Anadromous Fish Spawning” and “Maryland Department of Natural Resources Planning Guidance to Promote Resource Protection in Sensitive Watersheds”.

Striped Bass STAC Workshop Report - Staff reviewed the report from the Striped Bass Workshop in February.

New YSI Water Quality Meter - Staff received a new YSI Pro DSS for fieldwork. Staff took the new meter into the field to test on Wednesday (9/24). The DO sensor on the old YSI decided to quit working, so transition to the new YSI was quicker than expected. It provides readings significantly faster than its predecessor.

Conductivity Loggers - Five conductivity loggers were sent out for repair. The repair of these loggers will allow additional monitoring of conductivity in the spring and to have backups for current operational loggers.

Osprey - Staff met with researchers from USGS on Osprey and Atlantic Menhaden. The USGS researchers were provided information on Atlantic Menhaden status in Maryland’s portion of the Bay.

Corsica River - Staff attended the Corsica River Implementers meeting.

DNR/MDE Environmental Review - Staff attended the DNR/MDE Environmental Review Coordination Meeting. Anadromous fish data layer has not been incorporated into the revised screening tool. MDE has requested further guidance from DNR.

Looking Forward

Staff will demonstrate summer beach seining for Science Week.

Staff will work with Cooperative Oxford Lab to examine stomach contents of Striped Bass.

Staff will meet in October to discuss the 2025 Federal Aid Report.

Staff will winterize the boat and clean/fix/put away gear for the season.

Staff will continue examination of Striped Bass larvae gut contents.