



CHESAPEAKE BAY ECOLOGICAL FOUNDATION, INC.

STRIPED BASS & ATLANTIC MENHADEN MANAGEMENT QUESTIONED

25 Year Review & Assessment (1990-2014) of Striped Bass & Atlantic Menhaden Fisheries Management **Analysis of 2005-2015 Striped Bass Study – Predator/Prey Monitoring Program**

The Chesapeake Bay Ecological Foundation (CBEF) conducted the first long-term, year-round study of Chesapeake Bay striped bass, dissecting and examining over 15,000 from 2005-2015. At approximately 12", striped bass begin feeding on age 0 Atlantic menhaden (approx. 2"). Chesapeake Bay is primarily a production area striped bass; most females >16" become migratory ocean residents. Most striped bass harvested in Chesapeake Bay are 18"- 24" resident adult males that mainly consume 2"- 9" menhaden (ages 0&1). In 1990, Atlantic States Marine Fisheries Commission (ASMFC) increased the striped bass minimum size to 18" in the Chesapeake Bay and reduced fishing mortality. This strategy inadvertently created an unsustainable prey demand. Striped bass predation increased on bay anchovy (crucial prey for striped bass <18") as well as spot and blue crab (consuming up to 100,000,000 juvenile hard crabs in one year- MD DNR data). Predation on soft crabs is also significant; however, fast digestion precludes accurate detection during stomach content analyses. Concurrently, these populations of striped bass prey declined to historical lows (J. Uphoff- MD DNR), potentially disrupting the ecosystem. Striped bass natural mortality has increased greatly at the same time. CBEF recommends a lower striped bass minimum size to reduce natural mortality. Unfortunately, the current single-species strategy used by ASMFC to manage striped bass may be creating a bigger forage disparity for Maryland's part of the Bay by raising size limits and lowering fishing mortality further.

In the Chesapeake Bay, ages 0&1 menhaden dominate (by weight) the resident striped bass diet and are essential for nutritional health. Since the mid-1990s, MD DNR's Bay juvenile menhaden indices have remained low. In the mid-1990s, striped bass abundance rapidly increased, intensifying competition for ages 0&1 menhaden. By the late 1990's, the physical condition of resident striped bass deteriorated, growth slowed, skin lesions proliferated and natural mortality increased - indicating vulnerability to starvation and disease. Also, body fat, a nutritional indicator, is often low or absent in most striped bass during the fall, the most intense feeding period on age 0 menhaden.

In 2013, the ASMFC established a Total Allowable Catch of 170,800mT for the menhaden fishery, but failed to protect immature, ages 0&1 menhaden. Within the Chesapeake Bay during the spring, age 1 menhaden is the **ONLY AGE CLASS AVAILABLE** as prey for resident striped bass (approx. 16"-24"). A ban on menhaden purse seine reduction fishery harvest (processed into fish oil and meal) in the Chesapeake Bay or establishing a menhaden minimum size of 9" for the purse seine bait and reduction fisheries would prevent the large scale harvest of ages 0&1 menhaden, the crucial food source for Chesapeake Bay striped bass.