



**Chesapeake Bay Finfish Investigations**  
**Summary of 2010 Maryland Striped Bass Stock Assessment Surveys**  
**Natural Resources Article § 4-746**

The primary objective of the Striped Bass Program of the Maryland Department of Natural Resources (MD DNR) was to monitor and biologically characterize the striped bass population in the Maryland portion of the Chesapeake Bay and to assess the status of Maryland's striped bass spawning stock. Striped Bass Program surveys provide information regarding: recruitment, relative abundance, harvest, age structure and growth, mortality, and migration. The data generated are utilized in both intrastate and interstate management processes and provides a reference point for future Atlantic coast striped bass management considerations.

The spring, 2010 spawning stock survey indicated that there were 17 age-classes of striped bass present on the Potomac River and Upper Bay spawning grounds. These fish ranged in age from 2 to 18 years old. Male striped bass ranged in age from 2 to 15 years old, with 3 year old and 5 year old males being the most abundant component of the male striped bass spawning stock. Age 14 (1996 year-class) females were the major contributors to the 2010 total female abundance. Age 8 and older females comprised 94% of the female spawning stock in 2010, a slight increase from 2009

The 2010 striped bass juvenile index, the annual measure of striped bass spawning success in Chesapeake Bay, was 5.6. This is below the average long-term average of 11.6. During the survey, biologists identified and counted more than 37,000 fish of 50 species, including 737 young-of-year (YOY) striped bass. Variable reproductive success is a normal condition of striped bass populations. Typically, several years of average reproduction are interspersed with occasional large and small year-classes. Large year-classes in successful spawning years like 2001, 2003 and 2005 bolster the population by offsetting less successful years. The largest year-class ever measured occurred in 1996.

Other species present in higher than normal abundance during the 2010 juvenile striped bass survey were spot, yellow perch and river herring. YOY spot, a species important as forage and popular among recreational anglers, were abundant and widespread in the Bay. Spot reproduction was the highest documented since 2005. White perch reproduction was above average in the Upper Bay, and average (healthy) bay-wide. River herring reproduction rebounded slightly from consecutive years of below average reproduction to values similar to 2007. Any increase in herring reproduction is encouraging because adult river herring populations remain at low levels and face many challenges including blockages to upstream migration and degraded water quality.

During the 2010 trophy season, biologists intercepted 238 fishing trips, interviewed 601 anglers, and examined 263 striped bass. The average total length of striped bass sampled was 913 mm total length (mm TL) (35.9 inches), which was the same as in 2009. The average weight was 7.8 kg (17.1 lbs). Most fish sampled from the trophy fishery were between seven and fourteen years old. The 2000 year-class (age 10) was the most frequently observed year-class, constituting 23% of the sampled harvest. Average catch rate based on angler interviews was 0.5 fish per hour.

In summary, Maryland commercial and recreational striped bass fisheries have been concurrently managed by the MD DNR as part of the Atlantic coastal stock under the auspices of the Atlantic States Marine Fisheries Commission (ASMFC). Data collected by MD DNR biologists are used in the management of both the recreational and commercial fisheries.