

## Species Profile: Bluefish

### Joint Plan Seeks to Restore Premier Fighting Fish

#### Introduction

Bluefish are one of the most sought after recreational species along the Atlantic coast. In the late 1970s, anglers petitioned the Mid-Atlantic Fishery Management Council (Council) to develop a Fishery Management Plan (FMP) for Bluefish to address concerns over the potential for harvest of bluefish by tuna purse seiners. Today, bluefish are jointly managed by the Council and the Atlantic States Marine Fisheries Commission (Commission). The Bluefish FMP, developed in the late 80s, is the first management plan developed jointly by an interstate commission and regional fishery management council. As a result of harvest restrictions imposed under Amendment 1 (1998), bluefish are rebuilding, with 2004 stock biomass estimated at 104 million pounds, above the current biomass threshold of 73.5 million pounds.

#### Life History

Bluefish are a migratory, pelagic species found throughout the world in most temperate, coastal regions, except the eastern Pacific. Bluefish migrate seasonally, moving north in spring and summer as water temperatures rise and moving south in autumn and winter to waters in the South Atlantic Bight. During the summer, concentrations of bluefish are found in waters from Maine to Cape Hatteras, North Carolina. In winter they tend to be found offshore between Cape Hatteras and Florida. Bluefish generally school by size, with schools that can cover tens of square miles of ocean, equivalent to around 10,000 football fields.

Bluefish feed voraciously on their prey, eating almost anything they can catch and swallow. Over 70 species of fish have been found in their stomach contents, including butterfish, mackerel, and lobster. Razor sharp teeth and a shearing jaw movement allow bluefish to ingest large parts, which increases the maximum prey size bluefish catch. Bluefish live for up to 12 years and may exceed lengths of 39 inches and weights of 31 pounds.

Bluefish reach sexual maturity at age two and spawn offshore from Massachusetts through Florida. Discrete groups spawn at different times and are referred to by the season in which they spawn: the spring-spawned cohort and the summer-spawned cohort. Recent research has also identified a fall-spawned cohort, demonstrating an expansive and prolonged spawning season. The cohorts mix extensively on the fishing grounds and probably comprise a single genetic stock.

#### Recreational & Commercial Fisheries

Bluefish are caught along the entire Atlantic coast. Recreational anglers from New England to the upper part of the South Atlantic pursue blues, no doubt due to their aggressive feeding habits and the spirited fight. According to the Marine Recreational Fisheries Statistics Survey, recreational catch averaged 60 million pounds annually from 1981 to 1993. Catch declined from 93 million pounds



Photo courtesy of NC Division of Marine Fisheries

#### Bluefish

##### *Pomatomus saltatrix*

#### Common Names:

snapper, baby blue, choppers, elfs, tailors

#### Interesting Fish Facts:

- Voracious foragers, traveling in large schools of similar size fish in pursuit of baitfish
- Are known to be cannibalistic

**Largest Recorded:** 31 pounds, 12 ounces

**Age at Maturity:** 2 years (14.9 - 20.1")

**Age at Recruitment:** 1 year (9.3 - 11.1")

#### FMP Rebuilding Goals:

- Biomass threshold ( $\frac{1}{2} B_{MSY}$ ) = 73.5 million lbs
- Biomass target = 147 million lbs

**Stock Status:** Not overfished, overfishing is not occurring

in 1986 to 11 million pounds in 2002. Since 2002, total catch has increased and reached 16 million pounds in 2005.

Commercially, bluefish are harvested using a variety of fishing gear including trawls, gillnets, haul seines, and pound nets. The commercial fishery landed 5.9 million pounds in 2005, down from eight million pounds in 2000, and the peak of 16.5 million pounds in 1981.

#### Stock Status

The most recent stock status information indicates that bluefish are not overfished and overfishing is not occurring, based on the biological reference points developed in the 2005 stock assessment (see sidebar opposite page). Trends in state and Northeast Fisheries Science Center data show a decreasing trend in fishing mortality, an increasing trend in population biomass, and an increasing trend in population numbers. Population abundance estimates show a general increase in overall abundance since 1997. Abundance peaked in 1982 at 176 million fish, declined to 57 million fish in the mid-1990s and has since increased to 92 million fish.

While the 2005 stock assessment was approved for management purposes, a number of research needs were identified including increased collection of age data, improved estimates of discard mortality, and initiation of tagging studies to improve understanding of migration and distribution.

#### Atlantic Coastal Management Considerations

The Commission and Council approved Amendment 1 to the FMP in 1998. Amendment 1 allocates 83 percent of the resource to recreational fisheries and 17 percent to commercial fisheries. However, the commercial quota can be increased up to 10.5 million pounds if the recreational fishery is projected to not land its entire allocation for the upcoming year. The commercial fishery is controlled through state-by-state quotas based on historic landings from 1981-1989. The recreational fishery is managed using a 15 fish bag limit. The Commission and NOAA Fisheries approved a total allowable landings limit of 24.8 million pounds for 2006. Of that amount, the Commission allocated 9.5 million pounds to the commercial fishery. Based on updated landings projections that suggest that recreational harvest levels could be exceeded, NOAA Fisheries allocated 7.9 million pounds to the commercial fishery.

Amendment 1 established a rebuilding schedule that sets a target fishing mortality (F) value to achieve a biomass that will support the maximum sustainable yield by year 2008, while providing the Commission and Council with the flexibility to modify the management program based on changes in the fishery or the resource. For the first two years of the bluefish rebuilding schedule (1999-2000), F was set at 0.51, reduced to 0.41 in years 3-5 (2001-2003) and finally to 0.31 in years 6-9 (2004-2007). During the rebuilding period, the target F for the next fishing year will be set at the level specified in the schedule or the level estimated for the most recent year, whichever is lower. This strategy has allowed for rebuilding of the resource.

Figure 1. Total Bluefish Landings, with Estimated Fishing Mortality  
Source: Northeast Regional Stock Assessment Workshop, 2005

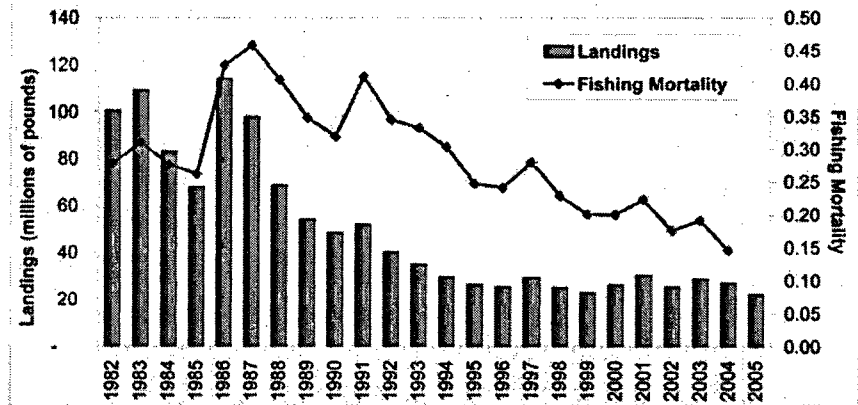


Figure 2. Estimated Bluefish Biomass, 1982 - 2004  
Source: Northeast Regional Stock Assessment Workshop, 2005

