Commission Implements New Regional Management Program for Blackfish

Introduction

Prized for being a "delicious fish," tautog is a highly sought after recreational species from Massachusetts through Virginia. Approximately 90% of the total harvest is taken by anglers, who catch them among hard structures such as rocky shorelines, piers, pilings, and natural and artificial reefs. Recently, the commercial fishery has expanded in some states, such as New York, where there has been an increased demand for tautog in the live fish market.

A slow growth rate and high site fidelity (tautog tend to stay near and return to their "home" reefs) make tautog particularly susceptible to overfishing. The 2016 stock assessment update indicates this non-migratory reef fish would be more appropriately managed as four stock units. The stock is overfished in all regions except Massachusetts-Rhode Island, with overfishing occurring in the Long Island Sound and New Jersey-New York Bight regions. Spawning stock biomass (SSB) has remained at low levels and management measures have proven insufficient to rebuild the stock.

Amendment 1 to the Tautog Fishery Management Plan (FMP), approved in October 2017, adopts a four-unit stock structure and implements a new management program to rebuild overfished tautog populations.

Life History

A member of the wrasse (Labridae) family, the tautog is a stout fish with an arched head and broad tail. Juveniles are greenish in color and become darker with age. Fishermen have given tautog the nickname "blackfish" due to its dark mottled sides that are either dull black, brown, blackish green, or blackish blue. Anglers also call tautog "white chin" because this coloring pattern commonly occurs on large males.

Tautog are slow growing and can live 35 to 40 years. Males and females are sexually mature at three to four years of age, but studies have shown that larger females produce significantly more (and potentially higher quality) eggs than smaller females. Tautog are distributed along the Northeast Atlantic coast from Nova Scotia to Georgia, with the greatest abundances occurring in the U.S. between Cape Cod, Massachusetts, and Chesapeake Bay. North of Cape Cod, tautog typically remain close to shore in waters less than 60 feet deep. South of Cape Cod, they inhabit waters 40 miles offshore at depths up to 120 feet. During spring, as water temperatures approach 48° F, tautog migrate inshore to spawn in estuaries and nearshore marine waters. They may remain inshore throughout the summer, then move to deeper (80-150 feet) offshore wintering areas as fall approaches and water temperatures drop below 52° F. Toward the southern end of their range, some adults may remain offshore throughout the year.

Tautog are daytime feeders, and feeding activity peaks at dawn and dusk. Adults feed primarily on oysters, mussels, and invertebrates, while the juvenile diet consists of amphipods and copepods. There are no species that preferentially feed on tautog, but fish-eating birds such as cormorants prey on juveniles. Smooth dogfish, barndoor skate, red hake, silver hake, sea raven, and goosefish have been reported to feed on both adults and juveniles.

Throughout their life, tautog aggregate around structured habitats. Shallow, vegetated estuaries and inshore areas serve as juvenile nurseries, while larger juveniles cohabitate with adults in deeper offshore waters. North of Long Island, tautog are generally found around rocks and boulders. Toward the southern end of their range, tautog often inhabit wrecks, jetties, natural and artificial reefs, and shellfish beds. They are also found near the mouths of estuaries and other inlets. Adults stay close to their preferred home site and, although they may move away during the day to feed, they return to the same general location at night where they become

Species Snapshot

Tautog
Tautoga onitis

Common Names: blackfish, tog, white chinner, black porgy

Family: Labridae, commonly referred to as wrasses, which have protactile mouths, usually with separate jaw teeth that jut outwards. Many species can be recognized by their thick lips, the inside of which is sometimes curiously folded.

The word "wrasse" comes from the Cornish word wragh, a lenited form of gwragh, meaning an old woman or hag.

Interesting Facts:

- Tautog have several specialized adaptations for living around hard structures, including a blunt nose, thick lips, and powerful jaws.
- They have conical (pointy) teeth in front, crushing teeth in back, and a set of pharyngeal teeth in their throat, which allow them to pick-up, crush, and sort hard prey such as mollusks and crustaceans.
- Their rubbery skin has a heavy slime covering that protects them while swimming around rocks.
- They are particularly hardy and can survive for hours kept on ice – which makes them desirable for the live fish market.

Maximum Age/Size: 34 years/3.1 feet

Stock Status: Overfished in Long Island Sound through Virginia, with overfishing occurring in the Long Island Sound and New Jersey-New York Bight regions.

dormant and may actually sleep. This aggregation around structure makes tautog easy to find and catch, even when biomass levels are low. The easy catchability and slow growth rate make tautog highly susceptible to overfishing and slow to rebuild.

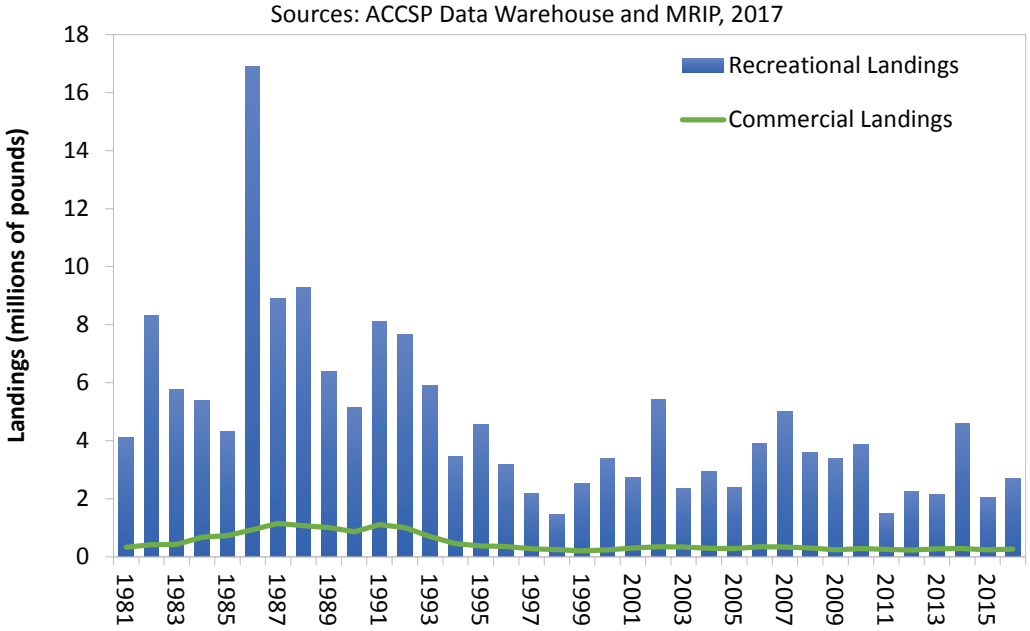
Commercial and Recreational Fisheries

Tautog can be found in waters off Massachusetts to Virginia, with the majority of landings occurring in state waters between Cape Cod and the Chesapeake Bay. Historically, tautog – or "tog" as many fishermen like to call this popular game fish – was a recreational fishery, with about 90% of the coastwide harvest taken by marine anglers. In recent years, however, commercial landings accounted for up to 44% of the catch in some states, largely due to a growing market for live fish. Most tautog are landed in the spring and fall, although some Mid-Atlantic fishermen pursue tautog year-round, and there is an active fishery off the Virginia coast in the winter.

Over the past 30 years, recreational harvest has ranged from a time series high of 16.9 million pounds in 1986 to a low of 1.5 million pounds in 1998. Since 2000, recreational harvest has averaged 3.2 million pounds, with 2016 harvest estimated at 2.7 million pounds. New York anglers accounted for 43% of the 2016 recreational harvest, followed by Connecticut (26%), and Rhode Island (12%).
Commercial landings have ranged from a high of 1.2 million pounds in 1987 to a low of 208,800 pounds in 1999. Landings have averaged about 290,000 pounds since 2000, with 2016 landings estimated at 269,000 pounds. About 50% of the 2016 commercial harvest was landed in New York alone, with Massachusetts and Rhode Island contributing another 40%, combined. Rod and reel are the predominant commercial gear, although floating fish traps, fish pots, and otter trawl are also used.

Tautog Recreational and Commercial Landings

Sources: ACCSP Data Warehouse and MRIP, 2017



Timeline of Management Actons: FMP ('96); Addendum I ('97); Addendum II ('99); Addendum II ('02); Addenda IV & V ('07); Addendum VI ('11); Amendmenmt 1 ('17)

Stock Status

Unlike previous assessments, which assessed the stock on a coastwide basis, the 2015 Benchmark Stock Assessment and Peer Review Report evaluated stock status regionally to reflect differences in life history characteristics and harvest patterns. Based on analysis of all available data, including life history information, tagging data and fishery characteristics, the coastwide population was split into three regions to assess and manage tautog. This new approach comprised a Southern New England region (Massachusetts, Rhode Island, and Connecticut), a New York-New Jersey region, and a DelMarVa region (Delaware, Maryland and Virginia). The Tautog Management Board (Board) accepted the 2015 assessment for management use, but expressed concern about the proposed three-region stock delineation that would split Long Island Sound (LIS) into two assessment and management areas. This was seen as an issue because recent landings indicate a concentration of the effort in the LIS, and fishermen from Connecticut and New York routinely cross states lines when fishing. Thus, a new regional assessment was completed analyzing two additional regions (Long Island Sound and New

Tautog Biological Reference Points and Stock Status by Region

Region	Fishing Mortality			Spawning Stock Biomass (mt)			MSY or SPR	Status
	Target	Threshold	3-Year Average	Target	Threshold	SSB_{2015}		
Massachusetts – Rhode Island	0.28	0.49	0.23	3,631	2,723	2,196	SPR	Not overfished, overfishing not occurring
Long Island Sound	0.28	0.49	0.51	2,865	2,148	1,603	MSY	Overfished, overfishing
New Jersey – New York Bight	0.20	0.34	0.54	3,154	2,351	1,809	MSY	Overfished, overfishing
Delaware – Maryland – Virginia	0.16	0.24	0.16	1,919	1,447	621	SPR	Overfished, overfishing not occurring

Jersey-New York Bight) to comprise a four-region management scenario.

In 2016, the Board reviewed stock status across the three and four region management scenarios, ultimately electing to separate management into four regions: Massachussetts-Rhode Island (MARI), Long Island Sound (LIS), New Jersey-New York Bight (NJ-NYB), and Delaware-Virginia (DelMarVa). A four region stock assessment update was conducted using data through 2015. Stock status and associated reference points for the stock units is presented in the table on page 5. Spawning potential ratio (SPR) based reference points were utilized for the MARI and DelMarVa regions, and maximum sustainable yield (MSY) based reference points were used for LIS and NJ-NY Bight. Based on these reference points, the assessment update indicated that the stock is overfished in all regions except MARI, with overfishing occurring in the Long Island Sound and New Jersey-New York Bight regions.

Photo (c) Chip Lynch, NOAA Fisheries

Atlantic Coastal Management

While the 2016 stock assessment update still finds the tautog resource overfished in some regions, it paved the way for the development of a new approach to manage the resource, one that reflects the regional differences in the species' biology, as well as the behaviors of recreational and commercial fishermen who utilize the resource. In October, the Commission approved Amendment 1 to the Interstate Fishery Management Plan (FMP) for Tautog, which includes new management goals and objectives, biological reference points, fishing mortality targets, and stock rebuilding schedules. The Amendment institutes a fundamental change in tautog management, moving away from coastwide management towards regional management. Specifically, the Amendment delineates the stock into four regions due to differences in biology and fishery characteristics: MARI; LIS; NJ-NYB; and DelMarVa

Amendment 1 replaces the goal of the FMP to sustainably manage tautog over the long-term using regional differences in biology and fishery characteristics as the basis for management. Additionally, the Amendment seeks to promote the conservation and enhancement of structured habitat to meet the needs of all stages of tautog's life cycle. The plan objectives were modified to achieve this new goal.

Under Amendment 1 the four regions will implement measures to achieve the regional fishing mortality target with at least a 50% probability. No consistent schedule is required to achieve targets, but if the current fishing mortality exceeds the regional threshold, the Board must initiate corrective action within one year. A stock rebuilding schedule can be established via an addendum.

In addition, Amendment 1 establishes a commercial harvest tagging program to address an illegal, unreported and undocumented fishery. The tagging program will be implemented in 2019. Reports of illegally harvested fish have been documented in cases against fishermen, fish houses, and at retail markets and restaurants. The tagging program, which will accommodate both the live and dead commercial markets, was recommended by the Commission's Law Enforcement Committee to increase accountability in the fishery and curb illegal harvest. Tags will be applied by the commercially-permitted harvester at harvest or prior to offloading. Tautog must be landed in the state that is identified on the tag.

The states will submit implementation proposals by December 1, 2017 and all measures in the Amendment except for the commercial tagging program will be implemented by April 1, 2018. The commercial tagging program must be implemented by January 1, 2019.

The Amendment is available at http://www.asmfc.org/uploads/file/5a0477c3TautogAmendment1_Oct2017.pdf or via the Commission's website, www.asmfc.org, on the Tautog webpage. For more information, please contact Caitlin Starks, FMP Coordinator, at cstarks@asmfc.org.