

# Species Profile: Summer Flounder

## Joint Management Seeks to Improve Stock Condition

### Introduction

Highly valued by both commercial fishermen and recreational fishing enthusiasts from Massachusetts to North Carolina, summer flounder are often considered to be the most important flounder along the Atlantic coast. In addition to commercial fishing, businesses such as recreational charters, party boats, bait and tackle stores, and any number of businesses associated with boating and angling view summer flounder as an essential component of their businesses. Because of this importance there has been considerable debate and concern over the status of the resource and the need for more restrictive measures to manage the recreational fishery.

The Commission and the Mid-Atlantic Fishery Management Council (Council), which jointly manage summer flounder, set the 2017 specifications at a 3.77 million pound recreational harvest limit (RHL) and a 5.66 million pound commercial quota. Both represent substantial reductions from the 2016 fishing season and respond to the findings of the 2016 stock assessment update, which indicates the resource is not overfished but is experiencing overfishing. To constrain recreational harvest to RHL, states are implementing an increase in the minimum size limit by one-inch and a decrease in possession limits to no more than 4 fish. Currently, the need to improve the stock's condition while balancing the economic significance of the species to both commercial industry and recreational sector presents a difficult challenge to managers.

### Life History

Summer flounder are found in inshore and offshore waters from Nova Scotia, Canada to the east coast of Florida. In the U.S., they are most abundant in the Mid-Atlantic region from Cape Cod, Massachusetts to Cape Fear, North Carolina. Summer flounder usually begin to spawn at age two or three at lengths of about 10 inches. Spawning occurs in the fall and winter while the fish are offshore. Spawning migration is linked to sexual maturity, with the oldest and largest fish migrating first. As in their seasonal migrations, spawning summer flounder in the northern portion of the range spawn and move offshore (depths of 120 to 600 feet) earlier than those in the southern part of the range. Larvae migrate to inshore coastal and estuarine areas from October to May. The larvae, or fry, move to bottom waters upon reaching the coast and spend their first year in bays and estuaries. At the end of their first year, some juveniles join the adult offshore migration. Recent research has indicated a shift in the center of biomass northward that have been linked to an expansion of age structure of the population and possibly to changes in sea surface temperature.

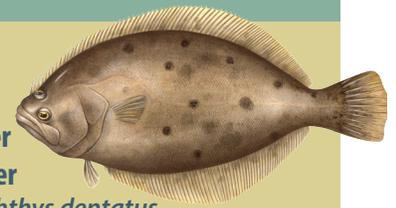
Adults spend most of their life on or near the sea bottom burrowing in the sandy substrate. Flounder lie in ambush and wait for their prey. They are quick and efficient predators with well-developed teeth allowing them to capture small fish, squid, sea worms, shrimp, and other crustaceans. A great fishing technique to take advantage of their ambush behavior is to fish close to bottom with moving bait.

### Commercial & Recreational Fisheries

Summer flounder are one of the most sought after commercial and recreational fish along the Atlantic coast, with total landings at approximately 15.45 million pounds in 2015. Using the base years of 1980 to 1989, the current plan allocates the summer flounder quota on a 60/40 percent basis to commercial and recreational fisheries, respectively.

Two major commercial trawl fisheries exist — a winter offshore and a summer inshore. Summer flounder are also taken by pound nets and gillnets in estuarine waters. Throughout the 1980s, commercial landings ranged from 21 to 38 million pounds, reaching peak landings of approximately 38 million pounds in 1984. By 1990, landings

### Species Snapshot



**Summer Flounder**  
*Paralichthys dentatus*

**Management Unit:** Massachusetts to North Carolina

### Interesting Facts

- Left-eyed flatfish (both eyes on the left side of its body when viewed from above with the top fin facing up).
- Fluke begin with eyes on both sides of their body; the right eye migrates to the left side in 20-32 days.
- Summer flounder are called chameleons of the sea because of their ability to match the color of the bottom on which they are found.

**Largest Recorded:** 24.2 pounds, 38.5" (Bradley, NJ, 2007)

**Maximum Age:** 14 years old

**Age at Maturity:** 50% mature by age 1; ~10" for males and ~11.5" for females.

**Stock Status:** Not overfished but experiencing overfishing



Photo (c) Open Boat Miss Montauk

reached a low of nine million pounds and have since fluctuated between nine and 17 million pounds. In 1993, the coastwide quota was implemented for the first time (set at 12.35 million pounds). Since then, commercial landings, which are limited by the quota, have ranged from 8.81 to 18.17 million pounds. 2015 commercial landings were estimated at 10.59 million pounds. The 2017 commercial quota of 5.66 million pounds will be the lowest in the history of the Fishery Management Plan (FMP).

Summer flounder are also highly prized in the recreational fishery, with anglers catching summer flounder from the shore, piers, and boats with hook and line. From 1980 through 2004, recreational harvest varied widely from a high of 27.97 million pounds in 1983 to a low of 3.14 million pounds in 1989. Starting in 1993, recreational harvest limits were implemented. From 1993 to 2011, harvest ranged from 5.11 million pounds to 12.48 million pounds. 2015 recreational harvest was estimated at 4.72 million pounds.

### Stock Status

The 2016 stock assessment update indicates the summer flounder stock is not overfished but is experiencing overfishing. Fishing mortality exceeded its threshold by 26% (i.e., the level beyond which overfishing is occurring). The 2015 estimate of spawning stock biomass is at 58% of the biomass target, and only 16% above the threshold. These results appear to be driven largely by below-average recruitment (the number of fish that enter the population) from 2010 to 2015. Additionally, indices of abundance from state and federal surveys have indicated declines in abundance ranging from 9 to 97% from their most recent peaks (generally 2009 to 2012). The 2016 assessment update estimated biomass has been trending down since 2010.

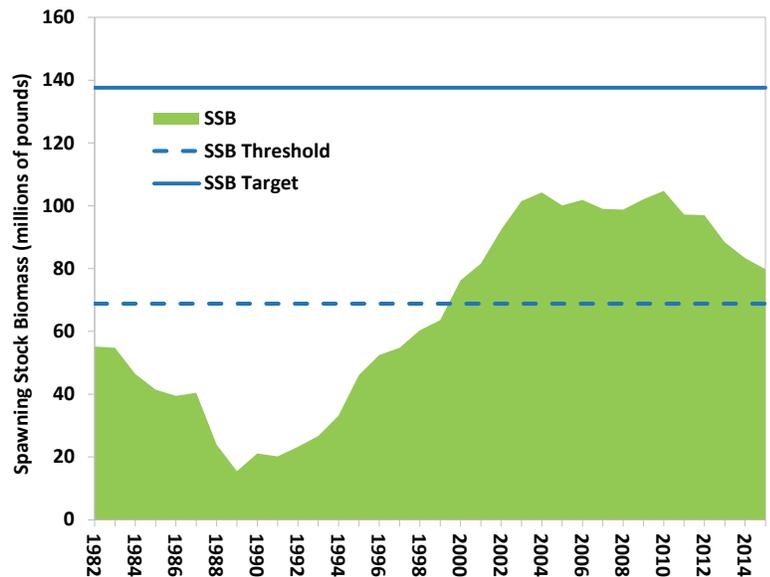
The next benchmark stock assessment is tentatively scheduled for completion in 2018. In addition to the current modeling approach, scientists will explore using a sex-specific model. The sex-specific approach would allow scientists to independently assess female and male summer flounder based on their different life history characteristics, such as how fast they grow. The results of the assessment could be used to determine the potential impacts of various management measures (e.g., minimum size) on the summer flounder population.

### Atlantic Coastal Management

The Commission approved the first Summer Flounder FMP in 1982, followed by a similar FMP approved by the Mid-Atlantic Fishery Management Council in 1988. Since then, both groups have made significant revisions to the plan, from allowing states to craft regional recreational management measures through conservation equivalency, to instituting accountability measures for evaluating annual landings to coastwide catch limits. The commercial fishery is managed by annual state-by-state quotas that are controlled through trip limits, gear specifications, and permit requirements. On the recreational side, annual harvest limits are managed through the implementation of minimum size limits, possession limits, and season lengths. In recent years, a regional management approach has allowed states within a region to implement consistent measures and improve equitable access to the resource. This

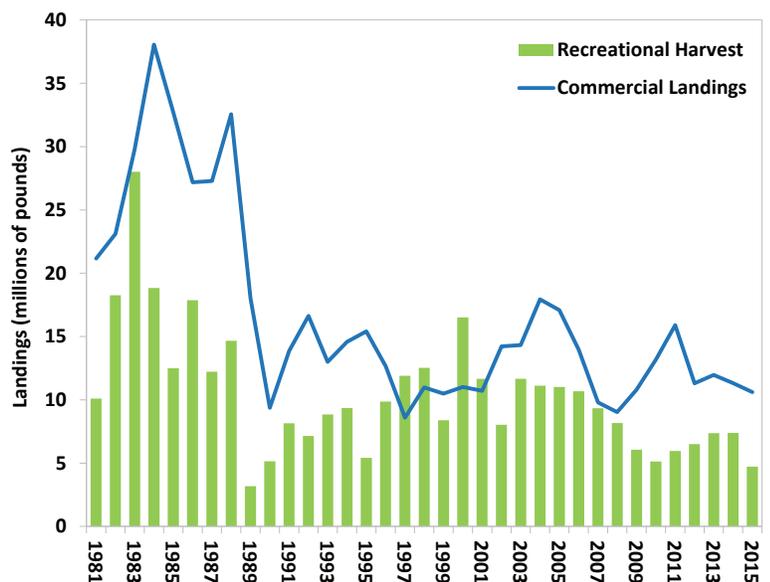
**Summer Flounder Spawning Stock Biomass**

Source: Northeast Fisheries Science Center Stock Assessment Update, 2016



**Summer Flounder Commercial Landings & Recreational Harvest**

Source: NMFS Fisheries Statistics Division, 2016



approach has come with tradeoffs, where the boundary waters of neighboring regions have created situations where anglers are subject to different regulations while fishing within the same waterbody. The Commission is continuing seek solutions to address this dilemma.

In response to the findings of the 2016 stock assessment update, the Commission and the Council approved a 2017 RHL and commercial quota that was approximate 30% decrease from 2016. In taking this action, the Commission and Council seek to protect the resource and prevent it from being declared overfished. If the stock were to fall below the threshold, it would be considered overfished, requiring the development of a rebuilding plan to reduce fishing mortality and rebuild stock biomass.

The joint management of summer flounder through the Commission and Council continues to provide challenges to stakeholders wanting more flexibility, while also seeking to protect the resource from becoming overfished. Both groups continue to work on the development of a comprehensive amendment to the Summer Flounder FMP, focusing on possible changes to management of commercial fisheries as well as the goals and objectives of the FMP. Issues such as equitable access, state-by-state commercial allocation, permitting, and quota transfers will be considered. A public comment document is anticipated for release in 2018. Currently, recreational management strategies are being addressed outside of this amendment process.

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