

# The BIG Five

## New Jersey's Most Popular Recreational Species



### Atlantic Striped Bass

*Morone saxatilis*

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Atlantic striped bass stock status is assessed on a coastwide basis. The 2018 stock assessment indicated the stock is overfished and experiencing overfishing. Addendum VI to the Fishery Management Plan sought to end overfishing by reducing the bag and size limit to 1 fish at 28 inches to less than 38 inches. In August 2020, the Atlantic States Marine Fisheries Commission's (ASMFC) Striped Bass Management Board initiated the development of Amendment 7 to update the management program to reflect current fishery priorities.

New Jersey's recreational striped bass harvest (number of fish) is typically one of the highest harvests by state coastwide.

#### Research

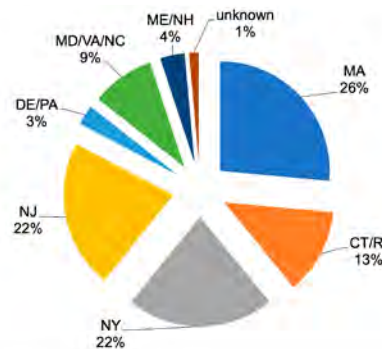
Atlantic striped bass is one of the most data-rich species along the coast. New Jersey Fish and Wildlife staff conduct multiple research projects to collect data on this important species.

New Jersey has participated in the U.S. Fish and Wildlife Service's (USFWS) **Cooperative Coastal Striped Bass Tagging Program** since 1989. Fish are tagged with pink tags and biological data is collected prior to release. More than 35,000 striped bass have been tagged by Marine Fisheries staff. (Figure 1)

The **Ocean Trawl Survey** samples the nearshore ocean waters of New Jersey and collects biological

data from many species, including striped bass. An index of abundance for striped bass is calculated using data collected in April.

**Figure 1: Location of recaptured striped bass tagged by Marine Fisheries staff (1989–2020).**



The **Delaware River Seine Survey** samples sites along the tidal portion of the Delaware River. The survey targets young-of-year striped bass to provide an annual index of striped bass recruitment.

Biological samples are also collected during **party/charter boat and tournament sampling**. All data collected is used for coastwide stock assessments and to

help characterize the striped bass fishery in New Jersey.

Since New Jersey does not allow netting or sale of striped bass, the commercial quota was transferred in 1990 to the recreational fishing sector in the form of the **Striped Bass Bonus Program**. Anglers provide valuable data for assessing stock status and fishing trends, making it an integral part of striped bass management.

#### Best Fishing Methods

- **Surf fishing:** Using artificial lures, teasers, surf rigs, flies or baits
- **Boat or kayak:** Trolling, live-lining, fly fishing, casting artificial lures
- **Best baits\*:** Bunker, clams, eels and bloodworms

\* *Reminder: Non-offset circle hooks are required when fishing for striped bass with bait, which is defined as any marine or aquatic organism live or dead, whole or parts thereof. This does not apply to any artificial lure with bait attached.*

#### Did You Know?

- In 1878, striped bass collected from the Navesink River were transported by rail and successfully introduced to the waters of California.
- New Jersey sits in between two of the three most important spawning areas for striped bass: the Hudson River and Delaware River.



## Tautog (Blackfish)

*Tautoga onitis*

A 2021 stock assessment for tautog determined the stock in the New Jersey-New York Bight region had improved since the 2016 assessment. It remained overfished, but the region was no longer experiencing overfishing.

New Jersey's tautog fishery is predominantly recreational, accounting for more than 90% of the state's tautog landings in any year. NOAA tracks recreational fisheries landings and New Jersey's harvest has ranked within the top five states for 38 of the last 40 years in numbers of fish landed, and for 36 of those years in harvested pounds. Tautog were heavily harvested during the 1980s into the mid-1990s. With the implementation of a Fishery Management Plan in 1996, landings decreased as management measures went into effect. (Figure 2)

### Research

The relative abundance and biomass indices for tautog on the **Ocean Trawl Survey** have been variable since 1989, showing a period of high abundance early in the time series followed by interspersed periods of declines and moderate recoveries. (Figure 3)

### Best Fishing Methods

Tautog, also known as blackfish, are structure-oriented fish, often found in and around shipwrecks, artificial reefs and natural rock formations. The traditional rod and reel is the most common gear used, with a minimum 8-ounce sinker and 30-pound test line. Preferred bait is green crab, but they are also caught using other crab species, clam and conch. As mostly bottom-dwelling fish, they are vulnerable to barotrauma when being reeled up. More information on tog fishing can be found at <https://www.nj.gov/dep/fgw/arttautog08.htm>.

### Did You Know?

Tautog are known for occupying tight spaces within reef structures or rock piles, sometimes lying on their sides to fit. This habit can account for instances of snagged and lost gear when fishing for tog, especially if you miss the initial, gentle *tap-tap* as the fish tests the bait before it quickly grabs it and scurries into a snug, sheltering nook.

Tautog can live into their 20s with some surviving over 30 years. Yet for such a long-lived species, they reach sexual maturity early with about 80% considered mature at age 3, and 100% fully mature at age 4.

Figure 2

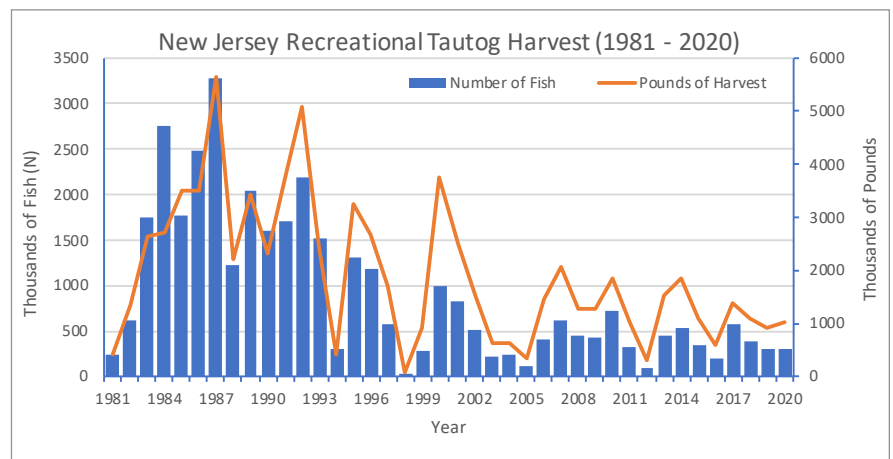
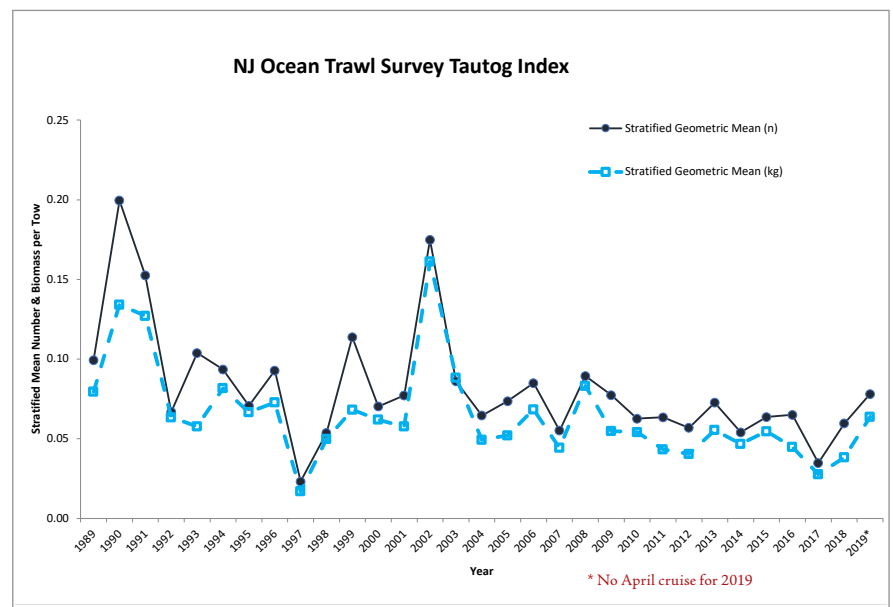


Figure 3







## Summer Flounder (Fluke)

*Paralichthys dentatus*

ASMFC's 2021 stock assessment indicates that summer flounder is neither overfished nor experiencing overfishing. The stock has rebounded considerably from record low numbers in the 1980s and 1990s but is not considered rebuilt.

New Jersey typically lands roughly 47% of the coastwide recreational harvest and has landed more fluke than any other state on the east coast for the last five years.

### Research

The **Ocean Trawl Survey** has collected over 40,000 summer flounder, annually averaging 1,300 fish. An annual index of abundance provides valuable data for the coastwide stock assessment. In recent years, the trawl has observed an increase in summer flounder abundance.

### Best Fishing Methods

Fluke represent the quintessential New Jersey fish, providing some of the highest regarded table fare at restaurants and generating an enormous amount of saltwater angling effort along the coast. They are caught from sod banks, ocean beaches or by boat allowing access to all that have the desire to catch them.

Fishing starts towards the middle of May in the back bays and estuaries and ramps up to true door-mat hunting in the ocean by mid-June. July and August are typically the best months for ocean fishermen, however in recent years, inshore waters have been producing well during summer months.

There are generally two fishing approaches: strip bait or artificial grubs on the back of jigs. Depending on conditions, both methods have their dominance over the other and should be considered to increase the odds of producing a keeper.

### Did You Know?

Found in both inshore and offshore waters from Canada to Florida, they are most abundant in the Mid-Atlantic region from Massachusetts to North Carolina.

Spawning begins at age two or three, at about 10 inches, in the fall while fish are moving offshore into deeper water. Larvae migrate to inshore coastal and estuarine areas from October to May.

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.

Life starts as a laterally compressed fish with one eye on each side of the body. As they grow, their eyes migrate to a single side and the fish assume a dorso-ventrally compressed body type, meaning both of their eyes are found on the top of their head with a flat body. They are a left eyed flounder.

## Bluefish

*Pomatomus saltatrix*

In 2021, the coastwide stock assessment for bluefish was updated with data through 2019 and showed that while fishing mortality was at sustainable levels, spawning stock biomass was not. The Mid-Atlantic Fishery Management Council and ASMFC recently approved a plan to rebuild biomass to target levels within 7 years. The assessment is currently undergoing a full review in a process called a *research track assessment* which will include data through 2021 and will form the basis of bluefish management in New Jersey.

New Jersey's recreational bluefish catch (harvest + live releases) is the second largest on the coast averaged over the last five years.

### Research

Nearly 3,500 bluefish have been collected in the **Delaware River Seine Survey**. An annual abundance index includes data from June through the end of September.

The **Ocean Trawl Survey** has consistently high catches (and often the plurality of catches) during October sampling and this data is used to calculate an annual index of abundance for bluefish. (Figure 4)

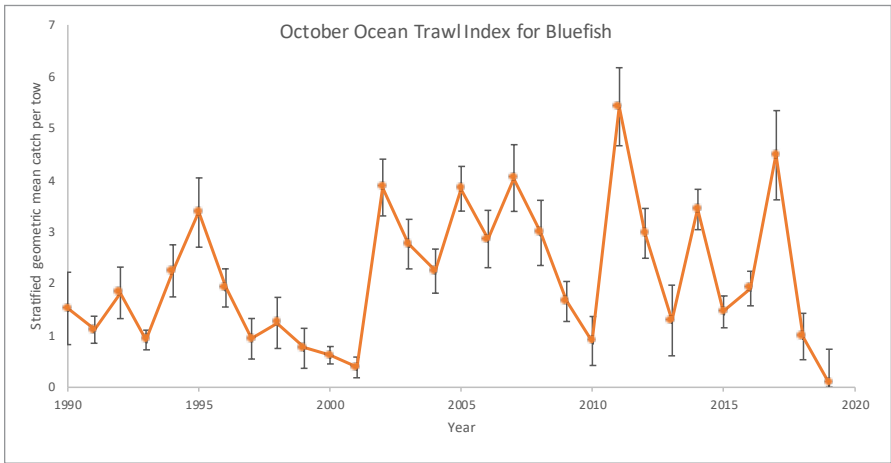
### Best Fishing Methods

- For excellent tips, readers can find a 2016 article on fishing methods here (scroll to end): <http://www.njfishandwildlife.com/pdf/2016/digmar6-13.pdf>.
- Bluefish are voracious; heavy tackle is helpful.
- Use a lure that mimics the bait the fish are feeding on. Trial and error or experimenting may be necessary.

### Did You Know?

- "...it is perhaps the most ferocious and blood-thirsty fish in the sea, leaving in its wake a trail of dead and mangled mackerel, menhaden, herring, alewives and other species on which it preys." From: [http://gma.org/fogm/Pomatomus\\_saltatrix.htm](http://gma.org/fogm/Pomatomus_saltatrix.htm).
- Bluefish are globally distributed.
- The largest bluefish caught was 31 pounds 12 ounces. From: <http://www.asmfc.org/uploads/file/5de573dfBluefishProfileOctNov2019.pdf>.
- Bluefish are considered mature at age two.

Figure 4





## Black Sea Bass

*Centropristis striata*

There are two stocks of black sea bass: Mid-Atlantic and South Atlantic. Based on most recent stock assessments, neither stock is overfished nor is overfishing occurring. Biological characteristics of this species are not fully understood and data are lacking, resulting in stock assessments that have a high degree of uncertainty.

New Jersey typically lands roughly 22% of the coastwide recreational harvest and has had the first or second highest landings compared to any other state on the east coast for the last five years.

### Research

Over 42,000 black sea bass have been collected in the **Ocean Trawl Survey**, annually collecting over 1,400 fish. Data is used for stock assessments. New Jersey's abundance index has been increasing steadily since 2015, corresponding with the latest coastwide assessment.

The **Ventless Trap Survey** samples three reefs off the coast using lobster traps to collect abundance data used to characterize fish populations inhabiting New Jersey reefs. In six years, over 1,500 sea bass have been collected.

### Best Fishing Methods

Black sea bass represent the kickoff to the ocean fishing season in the spring, providing some of the best fishing opportunities available for ocean going anglers. With a stock nearly 240% of the target biomass, there are plenty available to catch.

Fishing mostly occurs on boats in 30–120 feet of water. The preferred method is to use a two-hook, high-low rig with fresh clam or squid as an offering. Black sea bass sharpies looking for larger fish use a variety of metal jigs enticing a reaction bite from the most dominant fish in the school. Since sea bass are a structure-dependent species, fishing on one of New Jersey's 17 artificial reefs is a great place to hone your skills.

### Did You Know?

Inhabiting Atlantic coastal waters from the Gulf of Maine to the Florida Keys, they are concentrated in areas from Massachusetts to Virginia. They are typically found on rock bottoms around pilings, wrecks, jetties and artificial reefs. They summer in northern inshore water less than 120 feet deep and winter in southern offshore waters 240 to 540 feet deep.

Spawning occurs in coastal areas from January through July. Known as protogynous hermaphrodites, they start life as a female and change sex to become males around 9–13 inches at two to five years old. Following transition, a sea bass will either become a dominant male, characterized by a larger size and a bright blue nuchal hump during spawning season, or a subordinate male that has few distinguishing features.

Black sea bass rely on their large mouths to catch prey, eating whatever is available. They especially like crabs, shrimp, worms, small fish, clams and lobsters. 