



MASSACHUSETTS Division of Marine Fisheries

PAUL J. DIDDATI, DIRECTOR

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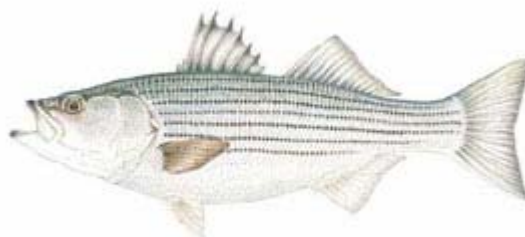
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Morone saxatilis

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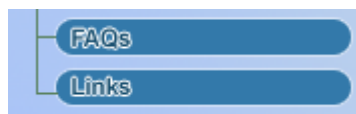
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Description

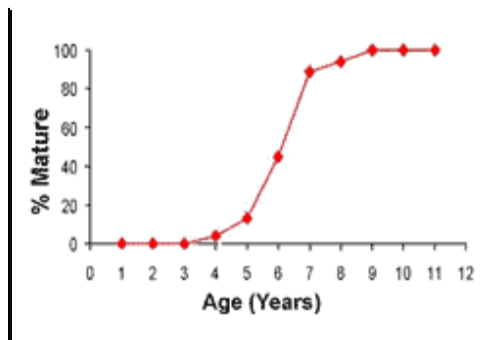
The striped bass, or "striper," one of the most avidly pursued of all coastal sport fish, is native to most of the East Coast, ranging from the lower St. Lawrence River in Canada to Northern Florida, and along portions of the Gulf of Mexico. The striped bass has been prized in Massachusetts since colonial times. In 1670, Plymouth Colony established a free school with income from coastal striped bass fisheries. Thus, one of the first public schools in America was supported by this highly valued resource. The unique angling qualities of this trophy species and its adaptability to fresh water environments have led to a major North American range expansion within the last 100 years. A valuable fishery has been created on the West Coast and inland fisheries have been developed in 31 states by stocking the striped bass into lakes and reservoirs.

Several characteristics distinguished the striper from other fish found in coastal Massachusetts waters. The striped bass has a large mouth, with jaws extending backward to below the eye. It has two prominent spines on the gill covers. The first (most anterior) of its two well-developed and separated dorsal fins possesses a series of sharp, stiffened spines. The anal fin, with its three sharp spines, is about as long as the posterior dorsal fin. The striper's upper body is blueish to dark olive, and its sides and belly are silvery. Seven or eight narrow stripes extending lengthwise from the back of the head to the base of the tail form the most easily recognized characteristic of this species.

Striped bass can live up to 40 years and can reach weights greater than 100 pounds, although individuals larger than 50 pounds are rare. The all-tackle angling record fish, taken in New Jersey in 1972, weighed 78 ½ pounds and measured 72 inches long. The Massachusetts record of 73 pounds has been equaled on three occasions, the most recent of which was at Nauset Beach in 1981. The following table lists average lengths and weights of striped bass at selected ages; the fish were collected in the Chesapeake Bay and Albermarle Sound (North Carolina) regions.



Females reach significantly greater sizes than do males; most stripers over 30 pounds are female. Thus, the term "bulls," originally coined to describe extremely large individuals, has been more accurately changed to "cows" in recent times.



Female striped bass age at maturity

The number of eggs produced by a female striped bass is directly related to the size of its body; a 12-pound female may produce about 850,000 eggs, and a 55-pound female about 4,200,000 eggs. Although males reach sexual maturity at two or three years of age, no females mature before the age of four, and some not until the age of six. The size of the females at sexual maturity has been used as a criterion for establishing minimum legal size limit regulations in recent years.

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Habits

Striped bass are rarely found more than several miles from the shoreline. Anglers usually catch stripers in river mouths, in small, shallow bays and estuaries, and along rocky shorelines and sandy beaches. The striped bass is a schooling species, moving about in small groups during the first two years of life, and thereafter feeding and migrating in large schools. Only females exceeding 30 pounds show any tendency to be solitary.

Schools of striped bass less than three years of age (sometimes called "schoolies" by anglers) occasionally travel from upstream into rivers such as the Hudson, Connecticut and Merrimac. Although adult striped bass move into rivers to reproduce, fish less than three years old probably make such journeys to take advantage of a river's abundant food resources.

Striped bass normally do not migrate during the first two years of life. However, adult stripers generally migrate northward in the spring and summer months and return south in the fall. Individuals that hatch in the Hudson River generally do not migrate beyond Cape Cod to the North and Cape May to the south. Fish hatched in the Chesapeake Bay exhibit more extensive Migrations, some being captured as far north as the Bay of Fundy in coastal Canada.

Stripers are strictly spring to fall transients in Massachusetts. Only a few fish inhabiting coastal Massachusetts waters in the summer have been known to overwinter in the mouths of southern New England streams. Some stripers frequenting coastal

Massachusetts in the summer will overwinter in the mouth of the Hudson River, while many spend winter along the New Jersey coast in the Delaware and Chesapeake Bays.

Stripers reproduced in rivers and the brackish areas of estuaries. Spawning occurs from the spring to early summer, with the greatest activity occurring when the water warms to about 65 degrees F. The eggs drift in currents until they hatch 1 ½ to 3 days after being fertilized. Because newly hatched larvae are nearly helpless; striped bass suffer their highest rate of natural mortality during the several weeks after hatching.

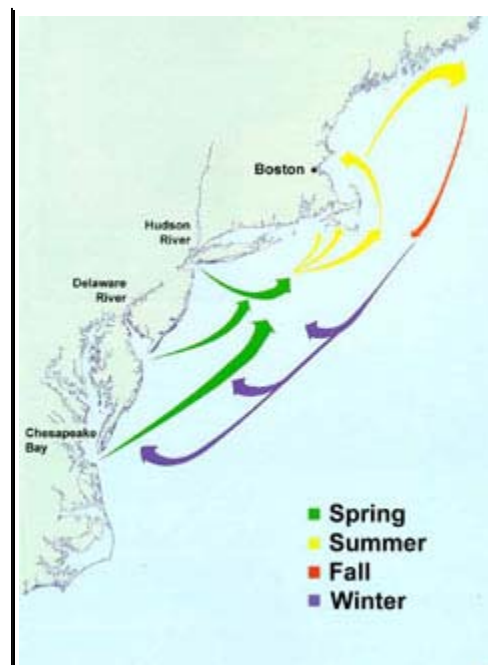
The major spawning activity for the entire East Coast fishery occurs in the Hudson River, the Chesapeake Bay, and the Roanoke River-Albermarle Sound watershed. Striped bass are most abundant in the New England and Mid-Atlantic states following year when reproduction in the Chesapeake Bay has been particularly successful, suggesting that much of the East Coast is strongly dependent upon the success of spawning in that one watershed.

Striped bass eat a variety of foods, including fish such as alewives, flounder, sea herring, menhaden, mummichogs, sand lance, silver hake, tomcod, smelt, silversides, and eels, as well as lobsters, crabs, soft clams, small mussels, annelids (sea worms), and squid. They feed most actively at dusk to dawn, although some feeding occurs throughout the day. During midsummer they tend to become more nocturnal. Stripers are particularly active with tidal and current flows and in the wash of breaking waves along the shore, where, fish, crabs, and clams become easy prey as they are tossed about in turbulent water.

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Management

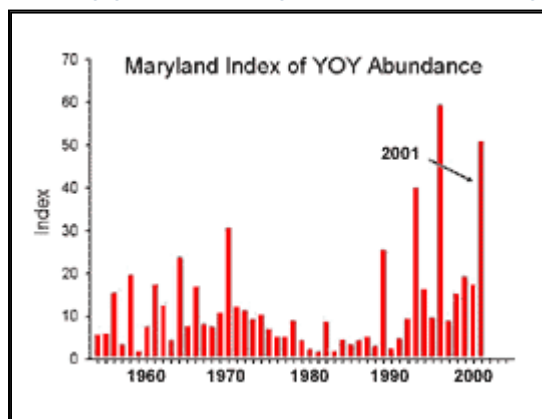
Striped bass populations have a history of periods of abundance interspersed with periods of scarcity. A major coast-wide reduction in abundance occurred at the end of the 19th century. No catches of stripers were reported north of Boston for 30 years after 1897. Populations had recovered somewhat by 1921, and an unusually successful year of reproduction in 1934 was followed by 6 years of markedly increased abundance. Great numbers of juvenile fish were recorded in Massachusetts waters in the mid-1940s, and



Striped Bass migration routes from the principal spawning grounds of the Chesapeake Bay, Delaware River, and Hudson River

high numbers of increasingly larger individuals followed for a period of years. Such information suggests that striped bass populations are dominated for extended periods by fish hatched during occasional years of unusually successful reproduction. Also, a year of successful reproduction is often followed by a series of years when spawning fails or is so limited in success that relatively few new fish enter the population. During the 1970s, the last peak year of reproductive success in the Chesapeake Bay was 1970 (note figure). Levels of reproduction were consistently low in the 1980s except in 1982 when modest numbers of juveniles were produced. Thus, most of the bass harvested in the during the 1970s and 1980s had come from the spawning effort of 1970. The recent extremely prolonged period of reproductive failure had caused a steady decline in striped bass abundance. The decline was reflected in decreasing success by anglers. For example, the estimated catch by anglers from the Gulf of Maine to the mid-Atlantic region fell from 6,600,000 pounds in 1979 to 1,700,000 pounds in 1985.

The decline in abundance of stripers coming from the Chesapeake Bay was felt to be caused by a combination of factors, including the presence of a variety of pollutants in spawning grounds, fishing pressure, and feeding and nutritional problems of larvae.



Maryland Juvenile Index; 1954-2001

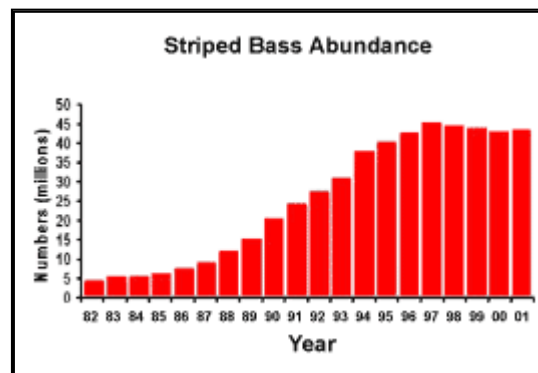
A rapidly changing management plan was developed in response to the severely depleted status of the striped bass. Prior to the mid-1970s, management of striped bass was carried out more or less independently by each coastal state. In 1979, Congress amended the Anadromous Fish Act to create the Emergency Striped Bass Study Program. In 1981, the Atlantic States Marine Fisheries Commission (ASMFC) adopted a coastwide management plan, to be acted upon by each coastal state. This plan recommended minimum size limits for fish caught in nursery rivers and in coastal areas, and restricted fishing on spawning grounds during the spawning

season. In response to constantly dwindling numbers of stripers on the East Coast, this plan was amended (Amendment 3) in 1985 to protect females hatched in 1982 until they have spawned at least once. In 1985, several states imposed mortaria or began a progressive increase in minimum size limits scheduled to reach 38 inches in total length by 1990. Amendment 3 of the ASMFC's plan also stipulated that regulations protecting the 1982 year class would remain in place until the 3-year average of the Maryland's juvenile index (a measure of year class strength) exceeded the long-term average of 8.0.

The Maryland juvenile index value exceeded 8.0 in 1989 and initiated a new management regime. In late 1989, Amendment 4 to the ASMFC's plan was adopted. The basic premise of this amendment was that striped bass must be managed first to restore the spawning stock biomass and secondarily to support fishery yield. Under Amendment 4, the states were allowed to relax regulations and prosecute tightly controlled fisheries starting in 1990. Daily bag limits of one or two fish were imposed on the recreational fishery of all

states and the commercial fishery was greatly reduced compared to historical levels. In addition, each state was required to monitor recreational catches and participate in fishery-independent monitoring or tagging studies used to estimate mortality.

During 1992-1994, improvement in the spawning stock and successive high Maryland indices and other favorable indicators of stock status prompted the ASMFC to declare in 1995 that the Atlantic coast striped bass population had recovered as estimated stock abundance had increased from 5 million in 1982 to around 41 million. Amendment 5 was then adopted to address management of recovered stocks. The amendment has allowed slight increases in fishing mortality and has broadened states' options for meeting management goals while retaining the objectives of preventing overfishing and maintaining self-sustaining spawning stocks.



Atlantic Coast Striped Bass Abundance

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Angling and Handling Tips

The striped bass is so highly prized for its size, battle on the line, and culinary merit, than many anglers consider it the premier game fish in Massachusetts. This species can be found from May to November along the entire Massachusetts coastline. Angling at dusk or dawn provides the greatest success during most of the season, but night fishing is often best during the midsummer "doldrums." Anglers are most successful when fishing the shoreline in areas where tidal rips, strong currents, or wave action create turbulent, "live" water.

Some anglers, who ply the beaches with swimming plugs and live eels, prefer the 10 to 12-foot surf rod and conventional reel spooled with 30 to 40-pound line. However, a medium to heavy spinning rod with 12 to 20-pound test line is considered ideal by many anglers for plugging, jigging, or offering bottom-fished baits to bass. Lures are attached directly to the line with a snap swivel. When bait fishing, the preferred rig consists of a pyramid sinker attached as a fish finder, and a long leader with a brightly colored float attached close to the hook. The float keeps the bait away from the bottom-dwelling crabs and skates.

Live lining of "herring," menhaden (pogies), or mackerel can be a very productive means of taking large bass. A fairly stiff boat rod with a conventional reel is the preferred rig. Baitfish is hooked through the back or snout using either a single or treble hook.

When trolling for bass adjacent to shoreline areas, the rod should be equipped with a high-ratio conventional reel and carbonyl guides to prevent line wear. By choosing among monofilament, lead-core or wire lines, depths from the surface to the bottom can be trolled. Many lures, including swimming plugs, jigs, tubes, and umbrella rigs- as well as live herring and menhaden - lend themselves well to trolling for stripers.

Large bass can be steaked, the baked, broiled or grilled. If steaks are cut particularly thick, they can be stuffed with slices of bacon, onions, tomatoes, green peppers, parsley, apples, and even cranberries, and spiced to taste. Place the lightly floured fish in a foiled baking dish, add one cup or mild red wine and bake at 400 degrees until the flesh flakes.

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Commercial Fishery Reporting Requirements

Commercial bass fishermen are required to submit a [catch report](#) detailing their fishing activities during the commercial season. The report asks for sublegal and legal sized catch, as well as whether the catch was sold, released or consumed. In addition, for those fish sold, fishermen must list their transactions detailing the date, the dealer the fish was sold to (including dealer name and permit number) and the pounds per transaction. Note that the fishermen may only sell striped bass to [dealers](#) authorized by the Division of Marine Fisheries to buy directly from fishermen. Fish sold to unauthorized dealers is strictly prohibited. Furthermore, unreported transactions may be grounds for loss of the striped bass endorsement on your license.

Dealer Reporting Requirements

Seafood dealers who wish to purchase striped bass directly from fishermen must hold a valid Massachusetts [seafood dealer permit](#) as well as submit a [primary buyer and quota managed species application](#) to the Division of Marine Fisheries. Buying striped bass directly from fishermen without prior authorization is strictly prohibited. Once a dealer becomes a primary buyer, there are [reporting requirements](#) that must be met.

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Questions or comments

regarding this site
should be sent to
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