



Species Profile

Atlantic Herring

New Stock Assessment Could Lead To Management Changes

Introduction

Until recently, the Atlantic herring stock had been considered healthy and fully rebuilt from a collapsed stock in the 1980s. However, the results of the 2018 benchmark stock assessment have raised new concerns about the Atlantic herring resource.

While the stock remains not overfished and was not experiencing overfishing in the terminal year (2017) of the assessment, the assessment did show very low levels of recruitment over the past five years. These results will likely have management implications for the species as regulators work to prevent overfishing from occurring in the coming years. Diminished stock size and, in turn, lowered catch limits will also impact fisheries that rely on Atlantic herring as an important source of bait, such as American lobster, blue crab, tuna, and striped bass fisheries.

Life History

Winter fAtlantic sea herring is one of 200 species in the clupeid family, which includes menhaden, shad, and river herring. It inhabits coastal waters of the U.S. from Cape Hatteras, North Carolina through Labrador, Canada, and off the coast of Europe.

Herring form the base of the food web as a forage species for many animals, from starfish and whelk to economically important fish such as haddock, cod, and flounder. Even the vast amount of eggs produced during spawning events serve as an important protein source for marine mammals, seabirds, and many fishes throughout the Mid-Atlantic and Northeast.

The species’ entire life cycle occurs in the ocean and is closely associated with plankton. After hatching, the larvae drift passively along coastal currents, consuming eggs and larvae of copepods, barnacles, and other invertebrates. After the larvae herring metamorphose into

juveniles (called sardines), they begin to gather in schools inhabiting shallow, inshore waters during the warmer months of the year.

As they grow into adults, herring continue to feed on plankton. Feeding behavior consists of nightly vertical migrations following the zooplankton that inhabit deep waters by day and surface waters by night.

Adults (age three and older) migrate south from summer/fall spawning grounds in the Gulf of Maine and Georges Bank to spend the winter in Southern New England and the Mid-Atlantic.

Herring spawn as early as August in Nova Scotia and eastern Maine, and during October and November in the southern Gulf of Maine, Georges Bank, and Nantucket Shoals. When temperatures are ideal, the ripe adult herring aggregate in massive shoals over habitats consisting of rock, gravel, or sand bottoms ranging from 50-150 feet deep.

A single mature female can produce between 30,000 and 200,000 eggs in one spawning event. Schools can produce so many eggs the ocean bottom is covered in a dense carpet of eggs several centimeters thick. Eggs hatch in 10-12 days depending on water temperature.

Commercial Fisheries

The earliest herring fisheries in North America date back 450 years. Today, Atlantic herring is predominantly a commercially caught species with markets in the U.S. and Canada. Since 2000, the domestic ex-vessel value of commercial herring landings has averaged \$30 million/year. The most common gears used to catch Atlantic herring are trawls (midwater and bottom) and purse seines. A small fixed-gear fishery

continues in Maine.

Atlantic herring catch increased in the 1960s, peaking in 1968 at 477,767 mt (1.05 billion pounds), largely due to a foreign fishery that developed on Georges Bank. **(to page 31)**



Atlantic Herring
Clupea harengus
Common Names: Sea herring, sardine, slid, common herring, Labradore herring, sperling

Interest facts:

- Atlantic herring and other clupeid fish have exceptional hearing. They can detect sound frequencies up to 40 kilohertz, beyond the range of most fish. This allows schooling fish to communicate while avoiding detection by predatory fish.
- While most members of the clupeid family are typically 5.9-9.8 inches in length, the tarpon can grow up to 8 feet long and weigh up to 280 pounds.
- Fresh herring bait is considered premium product and demands the highest prices.
- You can find fresh herring in some high-end restaurants and fish shops. Herring is often canned, pickled, or smoked. The meat is offwhite and soft. Small fish have a more delicate flavor than larger fish, which tend to taste oilier and pungent.

Age/Length at Maturity: 3 years/9.1 inches

Stock Status:

- Not overfished and not experiencing overfishing