



Species of Concern

NOAA National Marine Fisheries Service

River herring (Alewife & Blueback herring)

Alosa pseudoharengus and *A. aestivalis*



Alewife.
Photo credit:
Jim Nagus,
TN Wildlife
Resources.



Blueback
herring. Photo
credit: Jim
Nagus, TN
Wildlife
Resources.

KEY INFORMATION

Areas of Concern

Anadromous stocks in Maine through Florida

Year Identified as "Species of Concern"
2006

Factors for Decline

- Dams and other impediments
- Habitat degradation
- Fishing
- Bycatch
- Striped bass predation

Conservation Designations

IUCN: Not Evaluated

Current Status:

Demographic and Genetic Diversity Concerns:

River herring populations have exhibited drastic declines throughout much of their range (Fig 1). In Connecticut, river herring populations have been declining since approximately 1990 (Marteka 2004). This declining trend has also been observed in Rhode Island (since 2000), Massachusetts, and North Carolina.

The Ocean Biogeographic Information System (OBIS) website provides fishery independent data for river herring from a variety of sources. These data also indicate a significant declining trend in river herring populations throughout their range (Fig 3).

Existing Protections and Conservation Actions:

In response to the declining trend for river herring, the states of Massachusetts, Rhode Island, Connecticut, and North Carolina have instituted moratoriums on taking and possessing river herring.



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Brief Species Description:

Alewife and blueback herring are collectively referred to as “river herring.” They are **anadromous** planktivores that ascend coastal rivers in the spring to spawn. While at sea, they prey on small fishes, and are a highly migratory, **pelagic**, schooling species. Due to difficulties in distinguishing the two species, they are often harvested and managed together. They are thus both Species of Concern.

Alewife: Alewife are currently distributed from Newfoundland through North Carolina. Historically, they were found as far south as South Carolina, but they have not been documented this far south in recent years (ASMFC 2005). They may live up to 10 years and reach lengths of between 14 and 15 inches (36–38 cm) (Collette and Klein-MacPhee 2002). There is often a dusky spot on adult fish that is located at eye level on either side behind the margin of the gill cover (Collette and Klein-MacPhee 2002). Spawning migrations begin in the southern portion of the range and move progressively northward and are initiated when water temperatures reach approximately 41 to 50°F (5-10°C) (Collette and Klein-MacPhee 2002). Alewife spawn over a wide range of substrates such as gravel, sand, detritus, and submerged aquatic vegetation, which are found in large rivers, small streams, ponds, and large lakes. Spawning generally takes place when water temperatures are between 61 and 66°F (16-19°C) (Kocik 2000). Most adults reach sexual maturity by age four (Kocik 2000).

Blueback herring: Blueback herring have a more southerly distribution than alewife and are distributed from Cape Breton, Nova Scotia to the St. John’s River in Florida (VIMS 2003; Collette and Klein-MacPhee 2002). They reach a maximum size of approximately 16 inches (40 cm) and are believed to live up to 8 years (VIMS 2003). Blueback herring form schools and are believed to migrate offshore to overwinter near the bottom. They arrive in coastal waters approximately a month later than *A. pseudoharengus* (VIMS 2003). Blueback herring spawn from late March through mid-May, depending on latitude. They use a greater variety of habitats in areas where they co-occur with *A. pseudoharengus*, and spawning sites include areas with submerged aquatic vegetation, rice fields, swampy areas, and small tributaries upstream from the tidal zone (VIMS 2003). Females usually mature by age five. Males generally mature earlier (3 to 4) and at a smaller size than females. Juveniles remain in nursery areas until they reach a length of two inches (5 cm). They undertake diel vertical migrations in response to prey movement and availability (Collette and Klein-MacPhee 2002).

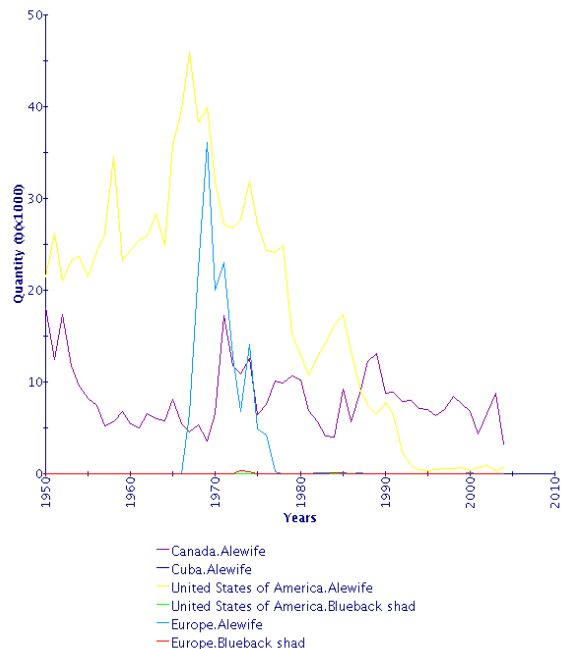


Figure 1. Global Alewife Landings (source: UN Food and Agriculture Organization)

Contact Information

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References:

- ASMFC. 2005 Review of the Atlantic States Marine Fisheries Commission Shad and River Herring FMP
- Collette, B.B., and G. Klein-MacPhee. 2002. Atlantic halibut. In B.B. Collette and G. Klein-MacPhee eds. Bigelow and Schroeder's fishes of the Gulf of Maine. Smithsonian Press, Washington, DC.
- Kocik, J. 2000. <http://www.nefsc.noaa.gov/sos/spsyn/af/herring/>.
- Marteka, Peter. 2004. The Hartford Courant. June 14.
- VIMS. 2003. <http://www.fisheries.vims.edu/femap/fish%20pages/Blueback%20Herring.htm>.