



SCUP

Stenotomus chrysops

Life History and Habitat Needs

Geographic Range

Scup are found in the Mid-Atlantic Bight from Massachusetts to South Carolina, but have been reported as far north as the Bay of Fundy in southern Nova Scotia, and as far south as Florida.

Water temperature is a main factor influencing the abundance of scup, as they prefer temperatures greater than 45 degrees F and most frequently within the range of 55-77 degrees F.

Movement/Migration

Scup reside in coastal waters from the Chesapeake Bay to southern New England from spring to fall. Scup migrate to offshore winter habitats along the outer continental shelf south of New Jersey. Juveniles follow adults to wintering areas, although some remain in larger and deeper estuaries during warmer winters. Scup migrate to summering grounds in spring when water temperatures start to rise above 7°C.

Spawning

Scup spawn once per year from May through August and peaking in June. The largest fish arriving to spawning grounds first, followed by progressively smaller fish. Spawning begins during the inshore migration when water temperatures are above 10°C. Scup usually spawn over weedy or sandy areas. Most spawning occurs in southern New England from Massachusetts Bay south to the New York Bight.

Habitat Use

Eggs are pelagic and commonly found in large bodies of coastal waters in and near southern New England during spring and summer. Scup larvae are also pelagic and are found in coastal waters. As larvae mature, they settle to the seafloor and develop into juveniles. Most juvenile scup are found in waters with temperatures about 10°C in the spring and from 16 to 22°C from summer to fall. Juvenile and adult scup live in a variety of intertidal and subtidal habitats such as rocky ledges; artificial reefs; mussel beds; sand, silty-sand, shell, and mud bottoms; and eelgrass. During the summer and early fall, juveniles and adults are common in most large estuaries, open sandy bottoms, and structured habitats such as mussel beds, reefs, or rock rubble. Adults prefer waters with temperatures around 7°C but have been found in waters with temperatures ranging from 6 to 27°C.

Threats to Habitat

- Bottom otter trawls; clam, sea scallop, and other dredges
- Coastal development
- Nonpoint source pollution
- Dredging and dredge spoil placement
- Port development, utilization, and shipping
- Marinas and recreational boating
- Energy exploration, extraction, processing, and transport

- Sewage treatment and disposal
- Industrial wastewater and solid wastes
- Marine mining
- Aquaculture
- Ocean disposal
- Introduced species

ASMFC Habitat Areas of Particular Concern

Sandy and weedy areas often used for spawning and structured habitats are important nursery areas for juveniles.

Recommendations to Improve Habitat Quality

- Reduce erosion and pollution in estuaries and coastal watersheds through conservation easements or other means.
- Establish windows of compatibility for activities known or suspected to adversely affect scup habitat (e.g., water withdrawals, dredging, bulkheading, and channel construction) and establish buffer zones around important nursery areas.
- Implement pollution prevention activities to prevent nonpoint source pollutants from entering surface waters.
- Design or update confined animal facilities to limit wastewater discharges and runoff.
- Reduce or eliminate pesticide use, and improve the application and calibration of spray equipment to minimize water quality degradation.

Habitat Research Needs

- Investigate the long-term synergistic effects of climate change and environmental parameters such as temperature, pH, and toxins on survival, reproduction, and genetic changes.
- Map, characterize, and quantify spawning sites, egg and larval habitats, and nursery areas.
- Determine the role of natural and artificial structures as habitat for all life stages.
- Identify and describe offshore winter habitats in the Mid-Atlantic Bight.
- Identify the habitat factors that result in patchy distributions of juveniles and adult scup.
- Determine the effects of altered population age structures on habitat requirements.
- Evaluate gear impacts to vital scup habitat.
- Compile information on the effects of environmental contaminants on the feeding, growth, fecundity, survival, and distribution of scup.

Additional Information

Scup are managed jointly by the ASMFC and the MAFMC. The Interstate Fishery Management Plan for Scup is current to Amendment 13 (2002) and its addenda through Addendum XX (2009). The management documents are available on the ASMFC website at www.asmfc.org or by contacting the ASMFC Habitat Program Coordinator at 703.842.0740.

