



## Life History and Habitat Needs

**Geographic Range:** Spotted seatrout occur in estuarine and coastal waters along the U. S. Atlantic coast from Cape Cod, Massachusetts to the Florida Keys, but are most abundant from the Chesapeake Bay southward.

**Movement/Migration:** Spotted seatrout are year-round residents of estuaries along the South Atlantic coast, although migration patterns vary regionally. They will move into deeper channels and holes, and occasionally offshore along beaches, to avoid extremely cold waters. Chesapeake Bay populations of spotted seatrout migrate offshore and south in fall and return to the Bay in spring. In North Carolina, spotted seatrout are caught year-round in estuaries, but can also be found in coastal, oceanic waters during winter. Tagging studies show that spotted seatrout populations in Georgia and Florida are relatively non-migratory.

**Spawning:** Spotted seatrout spawn from April through September along the Atlantic coast. In the southern part of the range (North Carolina to Florida), spawning occurs from mid-April to September, peaking in May with a second, smaller peak in July. Two spawning peaks have been observed in Chesapeake Bay: mid-May to mid-June and July. Spawning occurs at night both within estuaries and in the nearshore coastal waters at temperatures from 21-28°C. Typical spawning areas include deep channels adjacent to shallow waters, beaches near tidal inlets and mouths of sounds, and within creeks and sounds. Spotted seatrout are prolific spawners with females producing anywhere from 10,000 to millions of eggs.

**Habitat Use:** Spotted seatrout eggs are pelagic. Juveniles are often found in seagrass or oyster beds that have an abundance of prey, but are also found in tidal pools, small creeks, and along beaches in the surf zone. Adults are most abundant in semi-landlocked lagoons and quiet estuaries. In the Chesapeake Bay, adults tend to stay in shallow creeks and rivers adjacent to eelgrass and widgeon grass beds. Large areas of shallow, quiet, brackish waters with temperatures that range from 15-27°C and extensive grassy areas are preferred habitats and provide refuge from winter cold, abundant food supply, and protection from predators and competitors. Spotted seatrout are found in waters with salinities as low as 0.2 ppt (freshwater) up to 75 ppt (hypersaline waters). Laboratory studies estimate the optimal salinity is 20 ppt with ranges from 10-45 ppt for adults and 19-38 ppt for juveniles. Despite preferences for seagrass beds, the absence of seagrass beds along the coasts of South Carolina and Georgia does not preclude the presence of spotted seatrout in these areas.

## Threats to Habitat

- Habitat alteration (e.g., wetlands converted to agricultural use, bulkheads, proliferation of docks and marinas)
- Dredging and dredge spoil placement
- Recreational boating (e.g., damage to seagrass beds)

- Point and nonpoint source pollution
- Sewage treatment and disposal
- Hydrological modifications (ditching, channelization, freshwater flows)

## ASMFC Habitat Areas of Particular Concern

Seagrass beds provide important habitat for both juvenile and adult spotted seatrout. On the Atlantic coast, large declines of seagrass acreage have occurred in the Chesapeake Bay.

## Recommendations to Improve Habitat Quality

- Prohibit the use of any fishing gear having a negative impact on spot habitat within HAPCs (e.g., trawling in spawning areas or primary nursery areas should be prohibited).
- Provide comments on projects involving water withdrawal (e.g., power plants, irrigation, water supply projects) to ensure that impingement, entrainment, and/or modification of flow and salinity regimes will not adversely impact on spotted seatrout stocks. Develop water use and flow regime guidelines that are protective of spotted seatrout spawning and nursery areas.
- Identify hydropower dams that pose significant threats to maintaining adequate freshwater flows to spotted seatrout habitat and target them for appropriate recommendations during relicensing.
- Develop permitting conditions and planning considerations to avoid or mitigate adverse impacts to habitat areas of particular concern (e.g., dredging windows to reduce impacts to locations of eggs and spawning activity).
- Coordinate development and implementation of nonpoint source pollution control plans.
- Review adequacy of water quality standards to protect all life-stages of spotted seatrout.

## Habitat Research Needs

- Identify habitat requirements for all life-history stages of spotted seatrout.
- Quantify the impact of habitat loss and degradation on spotted seatrout populations.
- Investigate minimum and maximum tolerances for parameters such as dissolved oxygen, temperature, and salinity.
- Determine the impacts of any dredging activity (i.e. for beach re-nourishment) on all life history stages of spotted seatrout.

## Additional Information

Spotted seatrout are managed by the ASMFC under the Interstate Fishery Management Plan for Spotted Seatrout (1984). The FMP and related documents are available on the ASMFC website at [www.asmfc.org](http://www.asmfc.org) or by contacting the ASMFC Habitat Specialist at (202) 289-6400.

[www.asmfc.org](http://www.asmfc.org)

