

# State of South Carolina's Coastal Resources



## Seatrout Update

### Introduction

The spotted seatrout, *Cynoscion nebulosus*, is a member of the drum family (Sciaenidae) and is found throughout the estuaries and coastal waters of South Carolina. Along the east coast, this species occurs from the Chesapeake Bay south to the southern tip of Florida. Spotted seatrout are found along the Gulf coast from Florida to northern Mexico. The ASMFC (Atlantic States Marine Fisheries Commission) has management jurisdiction of this species off the east coast; however, because of its relative fidelity to a given state's water, the task of managing spotted seatrout is left to the individual states.

Throughout the species range, it is highly sought after by recreational and commercial fishermen. Along the east coast of the United States, commercial fishers in Virginia, North Carolina and Georgia can harvest spotted seatrout<sup>1</sup>. Spotted seatrout, also known as specs, speckled trout, winter trout, is a gamefish in South Carolina and can be harvested by hook and line throughout the year and gig in all months except December through February. The designation of spotted seatrout as a gamefish occurred in 1985. Presently, our state has a minimum size of 14 inches total length (tip of the snout to the maximum length of the tail) and a bag limit of 10 fish per angler per day.

### The Fishery

The gamefish status of this species in South Carolina waters eliminates any commercial fishery. Anglers fishing in smaller boats in inside waters (estuaries, harbors and bays) account for most of the recreational catch of spotted seatrout. Over 60% of the annual total catch of spotted seatrout is made during the last four months of the year (September through December).

The average total catch of spotted seatrout by the recreational fishery in South Carolina has shown a great deal of variability between years (Figure 1). The average since 1981 is approximately 400,000 fish per year.

As there are more and more restrictions placed on the harvest of spotted seatrout (size and bag limits), the number of fish caught and released alive has grown. The estimates of the total catch and those released alive come from the Marine Recreational Fisheries Statistical Survey (MRFSS) conducted by the NMFS. Creel clerks interview anglers and determine their harvest, how many were released alive, the species and the length of the catch. Those fish released alive have accounted for more than 40% of the total catch from 1981 through 2006 (Figure 2). Since 1994, more than 50% of the catch has been returned to the water alive.

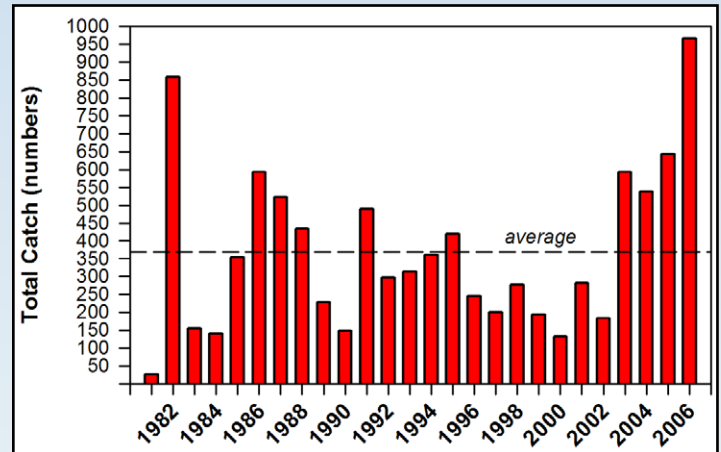


Figure 1. The annual total catch in thousands for spotted seatrout in the recreational fishery in South Carolina. Dashed line is the long term average. Data from the recreational survey of the National Marine Fisheries Service.

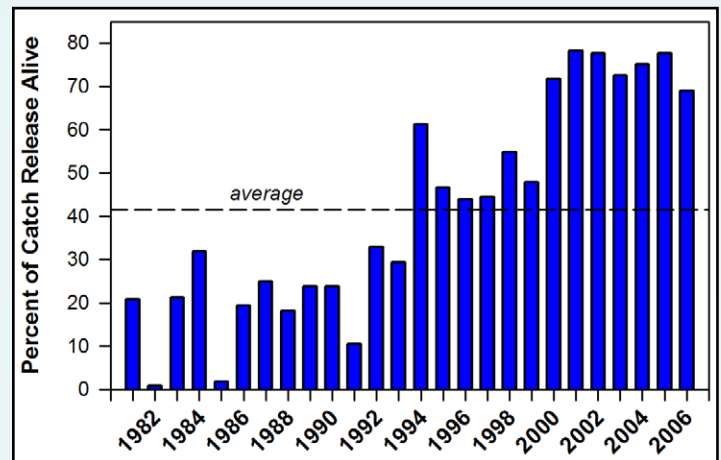


Figure 2. The percentage of the total catch that is released alive by recreational anglers by year. Dashed line is the average for the period. Data from NMFS.

In 2006, a summary of the sizes of spotted seatrout obtained by creel clerks who measured fish at access points showed that 6.6% of the catch was under the legal size of 13 inches total length (Figure 3). Fishes in the 14 inch size category made up the greatest percentage of the catch. Recent legislative changes raising the legal minimum size to 14 inches total length will alter the sizes of spotted seatrout in the landings.

### Fishery Independent Data Trammel Net Survey

We have been conducting a trammel net survey of certain estuaries throughout the state since 1991. We included all randomly

<sup>1</sup> Georgia's commercial harvest is limited to hook and line within the established minimum size and creel limit.

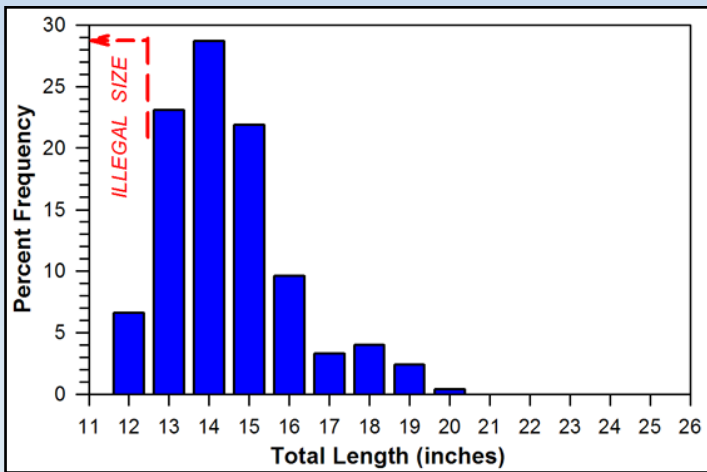


Figure 3. The sizes of spotted seatrout landed by anglers as reported by the NMFS in the Marine Recreational Statistical Survey. Note a significant part of the catch is below the legal minimum size of 14 inches during 2006.

selected stations to obtain an annual mean catch per trammel net set. In addition, we determine the percentage of the sets that were positive, i.e., contained spotted seatrout in the catch. The long term average CPUE (catch per unit effort) is slightly less than three spotted seatrout per set (Figure 4). In 2000, the CPUE was the highest for the time series. The CPUE increased for a three-year period prior to reaching the maximum. During the winters of these years, the water temperatures were moderate and no freezes were observed.

After the freeze of December 2000-January 2001, the survey catches have been lower than the long-term average until 2006. The values in 2002 showed a small increase; however, the period between the freeze and 2006 show that abundance in the survey has taken four years to recover to the long term average. The decline after 2000-2001 can be attributed to the significant mortality of spotted seatrout observed during that winter. Based on both the recreational catch and the fishery independent data for 2001, there was over an 80% reduction in abundance of spotted seatrout in South Carolina waters (reduction in fishery = 83%; reduction in survey = 86%).

In general, as the abundance of a species increases, the catch rates increase, the percentage of the samples that encounter the species increases, and the spatial distribution expands. The reverse is seen as the species abundance declines. Our data show that the frequency we encountered spotted seatrout since the freeze of 2000-01 was lower than the long term average until 2006 (Figure 5). In the year following the freeze, we caught spotted seatrout in about one-third of our samples; in 2006, the catch rate doubled to about 66% of the net sets. The recovery of the state's population of this species to levels approaching those prior to the cold-event took about four years.

### Present Condition of the Population

The population of spotted seatrout in South Carolina has improved since the freeze. Abundance levels are higher than the

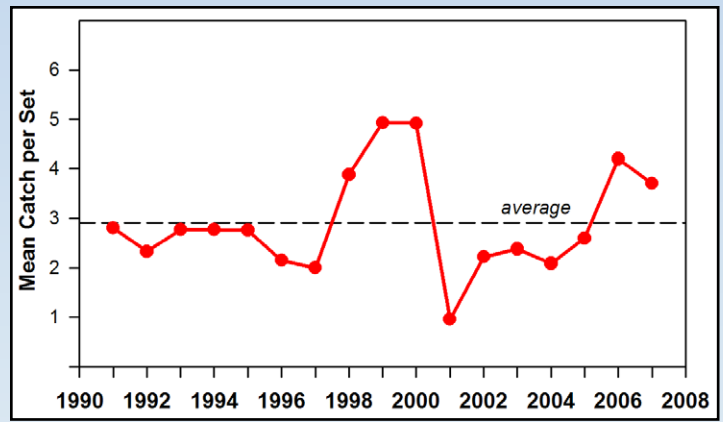


Figure 4. Average catch per trammel net set for spotted seatrout; dashed line is the long term average. Value for 2007 does not include data for November and December. These months have the highest catch per set volume.

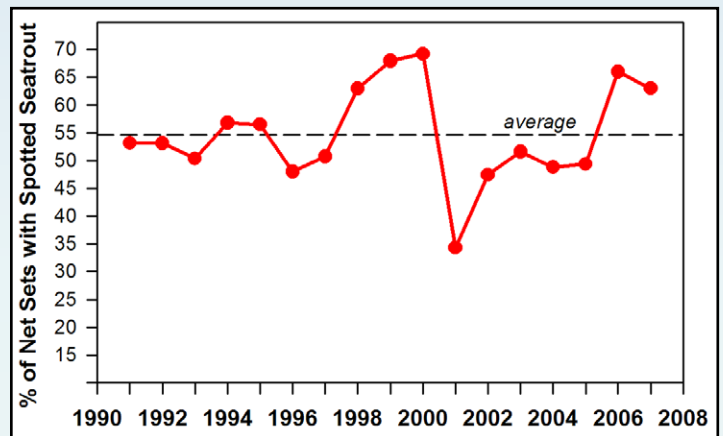
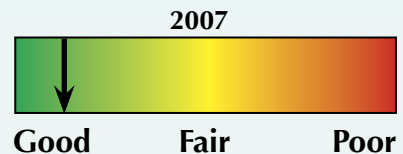


Figure 5. The percentage of the total number of net sets that caught spotted seatrout by year. Dashed line is the average for the period. 2007 data does not include November and December when spotted seatrout are most abundant. Data from SCDNR.

long term average. If the winter of 2007-2008 does not have a significant cold-weather event, we will enjoy good fishing in 2008. The increased abundance of all size of spotted seatrout is a good omen for a successful fall fishery this year.



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