

# Cooperative Science Services, LLC Dolphinfish Research Program

May 2014

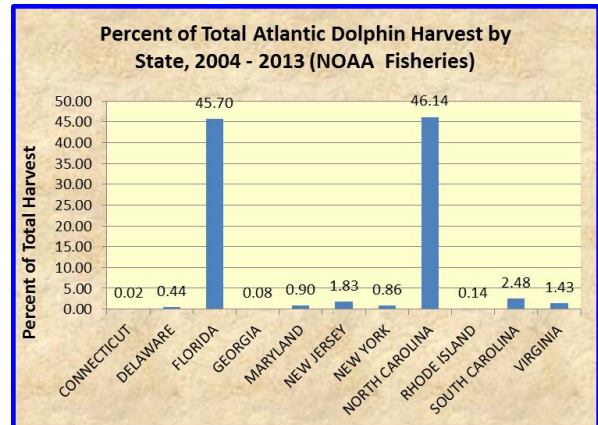


## U.S. Atlantic Dolphin Fishery Profile

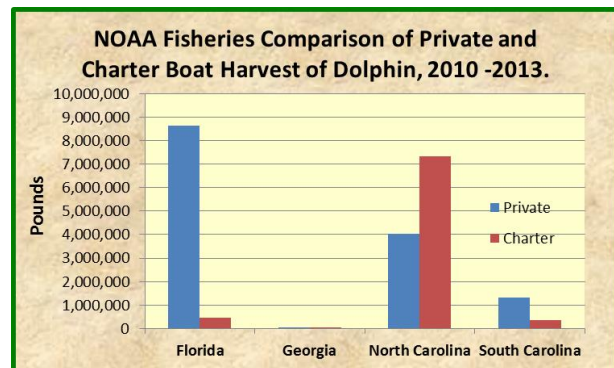
Each of us has his own opinion about what size fish make up the typical dolphin catch. Most anglers have a biased view of the fishery because it is based on their personal experiences and most anglers don't get to fish the entire U.S. Atlantic coast or experience the many methods used to catch dolphin. Fishermen are keenly aware of the changing size composition of dolphin from month to month in their area. Typically it is the medium size fish that show up first followed by the large fish and then the small fish. But at any given time you will find fish of all sizes.

The National Oceanic and Atmospheric Administration (NOAA) Fisheries monitors the marine recreational fisheries landings along the East Coast through their Marine Fisheries Statistical Office. Their monitoring of the recreational landing of dolphin from 2004 through 2013 shows that anglers in eleven states from New York to Florida harvest dolphin.

The following graph shows what share of the total dolphin harvest during the past ten years that each state produced. It is very clear that two states, Florida and North Carolina, dominate the fishery. Only three other states produced more than one percent of the total catch: South Carolina, New Jersey and Virginia. The graph shows that the states in the South Atlantic Bight (SAB) - Florida, Georgia, South Carolina and North Carolina, - accounted for more than 94 percent of the U.S. Atlantic catch. That leaves less than six percent of the catch for the anglers in the Mid-Atlantic Bight (MAB). Their low harvest level is not because of lack of interest, but rather lack of opportunity.



The U.S. Atlantic recreational fishery has two components, the private boat and the charter boat segments. Occasionally there is friction between these groups, so a look at who catches what is in order. Since the overwhelming share of the fishery is harvested in the SAB, this article will focus on this region's fishery during the past four years. Looking at the fisheries of the four states (see chart below), we see that charter boats contribute only five percent of the total catch in Florida and 20 percent in South Carolina. In Georgia they provided about an equal portion as the private boat fishery but both combined are insignificant in the overall catch. Only in North Carolina do charter boats harvest more dolphin than the private boat sector, catching nearly twice the number of fish.



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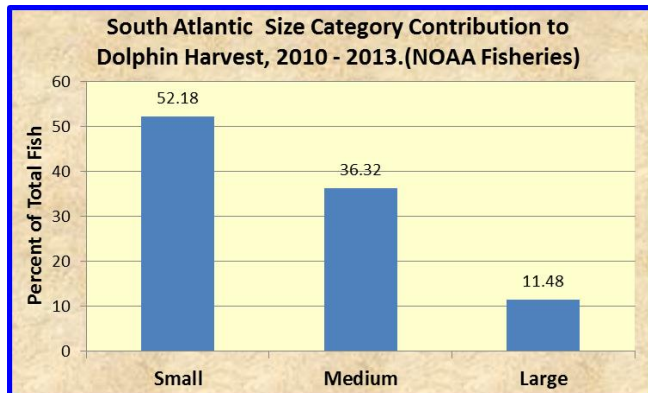
# Dolphinfish Research Newsletter

May 2014

Page 2.

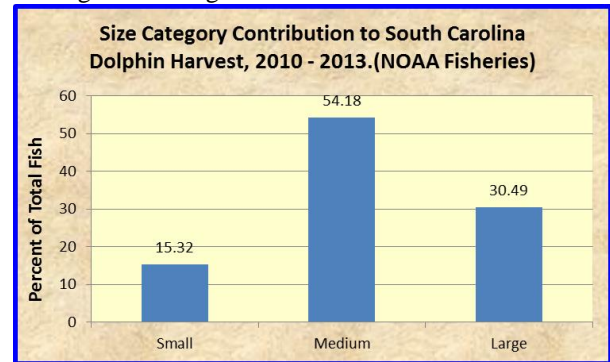
It is important for fishery managers to know what size and age class of the population is being harvested. For the purpose of this article, the harvested fish will be examined in three size categories: small fish, those up to 25 inches in fork length (FL); medium fish 26 to 35 inches FL; and large fish 36 inches FL or more. Age-growth studies have indicated that fish in the small category are typically less than six months of age but will range from 3 to 8.6 months. Fish in the medium-size class were shown to range from 4.5 to 12 months old, and individuals in the large-size group ranged from 6 months to more than three years of age. So another way to look at these size groupings is that small fish represent the very young-of-the-year fish (YOY), medium size are the old YOY. The large fish are the fastest growing YOY, the yearlings, as well as the two- and three-year-olds, or the geriatric group for this short-lived species.

The NOAA Fisheries data for the size of fish harvested in the SAB dolphin fishery from 2010 through 2013 (see graph below) shows a fishery based on the youngest members of the population. More than half of the dolphin harvested throughout the region are 25 inches or less in fork length. Medium and large fish make up 48 percent of the fish caught. The harvest profile for the states of Florida and North Carolina shows a similar profile, with Florida anglers harvesting a few more small fish and North Carolina fishermen catching a few more large fish.

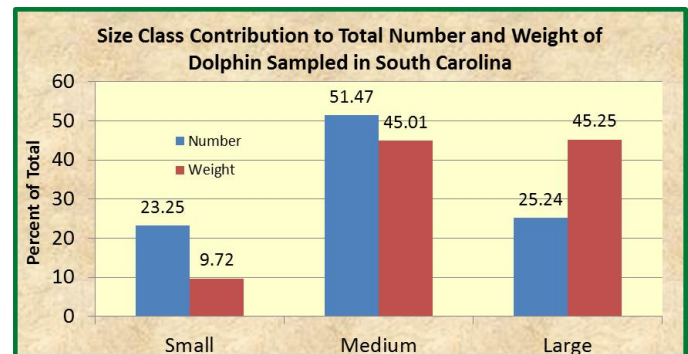


The size profile for dolphin caught off South Carolina shows a completely different picture from the rest of the East Coast states harvesting more than one percent of the total dolphin catch. While the state's dolphin fishery may only account for 2.48 percent of the total number of fish harvested, NOAA Fisheries data in the following graph show it to focus on the larger/older members of the population. More than 84 percent of the dolphin caught by South Carolina anglers are medium to large fish. Small fish make up only 15 percent of the total catch. This major difference in the fishery can likely be explained by the fishing technique that South Carolina anglers normally employ when fishing for game fish

offshore. Anglers fishing off the Palmetto State primarily troll to catch fish. Seldom do they stop to fish a school of small dolphin with chunk bait. The baits used for normal trolling are too large for most of the small fish.



Additional evidence of this disparity in the size distribution of dolphin caught off South Carolina compared to other states in the SAB was shown by a harvest survey conducted in 2013 by the DRP at a marina in Charleston, SC. (See graph below.) All dolphin caught by the recreational boats being sampled were weighed and measured to ensure no bias to the size distribution. Charter boats as well as private boats from 20 feet in length to 70-footers were sampled during the months of May, June, and July, 2013. The 744 dolphin that were measured weighed a total of 6,873 pounds. This survey showed small dolphin accounting for only 23 percent of the dolphin harvested, while medium to large dolphin composed more than 76 percent of the catch. One other point the DRP study found was that small fish contributed less than 10 percent of the total biomass of the dolphin harvested. Medium and large fish provided more than 90 percent of the total biomass.



Harvest data from the NOAA Fisheries Statistical Office show that the U.S. Atlantic coast dolphin fishery relies on the smallest and youngest segment of the population to provide the majority of the fish caught. These data indicated that while small fish made up more than half of the fish caught in both North Carolina and

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## Dolphinfish Research Newsletter

May 2014

Page 3.

Florida, fishermen in the Sunshine State relied more heavily on small fish than anglers in North Carolina. The numbers also shows that anglers off North Carolina caught a slightly higher proportion of large fish than did Florida anglers.

A big difference in the size structure of recreationally harvested dolphin was found only off South Carolina. Both the harvest statistics generated by NOAA Fisheries and the DRP agree that anglers off the Palmetto State primarily harvest medium and large dolphin, the older young-of-year and those more than 12 months of age. While some of the reduction in small fish brought in could be the results of the anglers voluntarily releasing their small fish, the size of baits used in their preferred angling method –trolling-- probably prevented small fish from being caught to start with. Because South Carolina anglers harvest such a small proportion of the total U.S. Atlantic recreational harvest, 2.48 percent, South Carolina's harvest has a minimal impact on shaping the total size distribution of the harvest. But it does show how angling technique can affect the size of fish caught.

The domination of the fishery by dolphin 25 inches or less off the U.S. East Coast is not new nor a change in the fishery. NOAA data for 1990 through 1993, show that small fish made up more than 59 percent of the dolphin caught those years. For the period of 2000 through 2003 NOAA data indicated small fish composing more than 57 percent of all dolphin caught. This shows that small dolphin have been the mainstay of the U.S. East Coast fishery for more than 20 years.

The size dolphin contained in the fish box at the end of the day comes down to when, where and how you are fishing.

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