# Cooperative Science Services, LLC Dolphinfish Research Program

October 2015

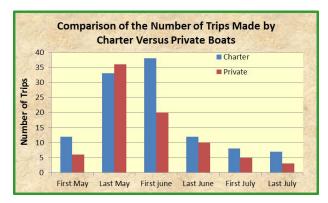


#### Division of the Recreational Harvest

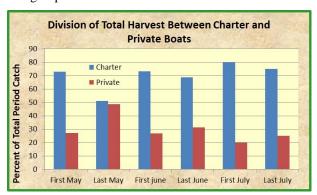
Fishermen are well aware of the sometimes contentious division of fishery resources between commercial interests and the recreational fishery. Harvest by these divisions is tracked very closely in some fisheries, such as with the bluefin tuna. Within the recreational fisheries there is another resource division that fishery managers probably pay more attention to than most private fishermen: private boats versus for-hire vessels. This interest is based on the fact that the crews of for-hire vessels, charter boats, tend to be more proficient at catching their targeted species.

Privately owned offshore boats outnumber charter boats in every U.S. East Coast state. However, the difference in numbers is mitigated by the number of fishing trips made by charter vessels. During the three-month-long DRP study conducted at a marina in Charleston, South Carolina, the most trips made by a single private boat was five, whereas several charter boats made 18 trips. In this study 14 charter boats made 110 trips, compared to 39 vessels that made 80 non-charter trips. (Note: Registered charter boats will occasionally make non-charter trips.)

The following graph depicts the number of charter and private boat fishing trips that were made in the first and last half of each of the months. In spite of the smaller number of boats involved, charter boats made more fishing trips each period with the exception of the last half of May, when private boats completed 3 more trips than the charter fleet. Private boats averaged making only 2.1 trips during the three months surveyed. Surprisingly, sixteen private vessels were intercepted only once during the study. Private boat anglers seemed to lose interest in fishing the first part of June when the number of private boat trips fell to almost half the number of for-hire trips. This suggests a direct correlation between the quality of dolphin fishing and the number of fishing trips made by private vessels.



Since they accounted for more than 57 percent of the fishing trips surveyed and dominated the fishing effort in all but one period, it is not surprising that the charter fleet accounted for the majority of dolphin caught, 755 fish or 62.6 percent of the total harvest. For-hire vessels caught at least twice as many dolphin as private boats in all but one period (see following graph). Only in the last half of May did the dolphin catch become nearly balanced between the two groups.



While the charter fleet did catch more dolphin than the private boats, was it just because they put forth more fishing effort? The following graph shows the average number of fish caught per trip for the two groups during each period. Charter vessels caught more dolphin per trip

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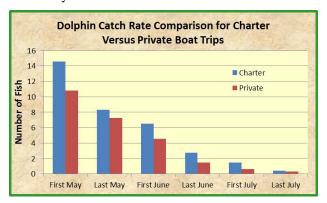






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in every time period, ranging from 14.4 to 150 percent more. The two segments of the recreational fishery were at their closest in production during the last half of May, when charter vessels averaged 8.33 fish per trip and private boats averaged 7.28 fish per trip. In the end, both segments of the fishery showed the same rapid decline in the harvest rates from their peak in the first of May to the end of July.



This three-month survey documented 1,207 dolphin harvested by 43 boats in one marina basin. The study showed that charter boats were responsible for 58 percent of the fishing effort, consistently caught more fish per trip and were responsible for 62.6 percent of the dolphin harvested. One interesting fact that came out was that, over the course of three months, individual charter boats averaged catching a total of 55 dolphin, which is not even one daily boat limit. Only eight boat trips kept 20 or more dolphin with 35 fish being the largest catch noted.

This study indicated that charter fishing efforts in South Carolina produced 62.6 percent of the dolphin catch with private boats accounting for the remaining 37.4 percent of the fish. How does the South Carolina division of the dolphinfish harvest compare to the two big dolphin harvesting states, Florida and North Carolina? One way to gauge this is to compare the portion of tagged dolphin recaptures reported by charter and private boats off the two states. The percentage of the tagged dolphin caught off each state by the two segments should be indicative of the general harvest pattern.

The results of this harvest analysis presented in the following table shows the fishery in the two states are virtual opposites. In Florida private boats overwhelmingly dominate the dolphin harvest with charter boats providing a meager 22.9 percent of the catch. In North Carolina it is the charter fleet that captures the lion's share of dolphin harvesting, 72.6 percent, with the private vessels catching just over 27 percent of the catch. Thus South Carolina's division of the recreational dolphinfish harvest lies between these two extremes.

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Dolphin Tagging Progress, September 1, 2015.

Zone	Area	Southern Limit	Northern Limit	Number Tagged
1	Bahamas	22 ° N	28 ° N	5
2	FL Straits	23 ° N	25 ° N	696
3	South Florida	25 ° N	27 ° N	269
4	Central Florida	27 ° N	30 ° N	22
5	North FL & GA	30 ° N	32 ° N	22
6	Southern SC	32 ° N	33 ° N	25
7	N. SC - S. NC	33 ° N	35 ° N	
8	Northern NC	35 ° N	36.5 ° N	
9	Virginia	36.5 ° N	38 ° N	1
10	N. Mid-Atlantic	38 ° N		18
11	Gulf of Mexico			43
12	W Central Atlantic			3
13	Caribbean Sea			50
	Total			1,154

Dolphin harvest based on DRP recaptures.

State	Charter %	Private %
East Florida	22.87	77.13
North Carolina	72.57	27.43

Charter captains are well known among fisheries managers for saying that any reduction in the creel limit of any fish will significantly reduce their number of charters each year, if not put them out of business completely. It should be noted that only three boat trips in this study harvested more than 20 dolphin in one day. Most of the boat captains, both charter and private, seemed to be in general agreement that 20 dolphin were considered to be as many as any one fishing crew needed. When a boat reached 20 dolphin in the box, the captains said that they would quietly move away from where the dolphin were to go looking for a billfish or wahoo. Anglers chartering the boats did not appear to have any problems with this reduced creel limit as indicated by the high level of repeat business enjoyed by the charter vessels.

#### 2,000 and Counting

On June 3, 2015, Don Gates and his crew aboard the *Killin Time II* completed a task they left undone in 2014: tagging their 2,000<sup>th</sup> dolphin for the Dolphinfish Research Program. Don and his crew are the only ones remaining active in the tagging study that have tagged fish in every year of the study. They are the first privately owned boat to reach this milestone and only the second boat crew to achieve this landmark, one year behind Capt. Jimbo Thomas's charter boat *Thomas Flyer*.

Don began tagging dolphin when he lived outside of Orlando, Florida, in 2002. He now resides in Conroe, Texas, and spends at least four weeks each year on the water off Cudjoe Key, Florida. His crew has averaged tagging 157 each year, with three years where they

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Don Gates, left, is joined by his Killin Time II-crew members Mike Vogt, center, and Darryl Williams to celebrate the tagging of their 2,000<sup>th</sup> dolphin for the DRP. Photo by crew member Allen Lewis.

exceeded 300 fish marked. In their best year, 2007, they tagged 389 fish, just below the all-time record of 415 dolphin tagged in one year set by Don Brown's crew aboard his boat *Draggin Dreams* in 2005.

The crew of the *Killin Time II* is very careful to handle the fish gently and to get them back in the water as quickly as possible. This attention and care in tagging the fish has resulted in 104 of their fish being reported recovered. As many as 30 of their tagged fish have been recovered in a single year. This is a recovery rate of 4.73 percent, which is almost twice the overall recovery rate for the study.

Don Gates and his crew are to be commended for their contribution to the scientific understanding of the dolphinfish's life history.

## Keeping the Lights On

If you were operating a program that had a bare-bones budget of \$43,000 per year and you took in only \$30,000 each year, how long would you continue to operate the program? That is where the Dolphinfish Research Program finds itself.

Everyone appreciates the work this study is doing and enjoys reading about the amazing findings of the research, but fishermen and industry do not feel compelled to provide financial support. Please consider making a fully tax deductible donation. Checks should be made out to the Reef Foundation/Dolphin Study and mailed to the program's address shown below.

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