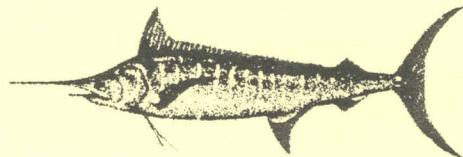
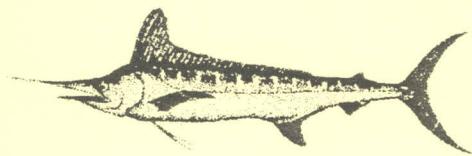




**BIG GAME FISHING IN THE  
NORTHERN GULF OF MEXICO  
DURING 1994 and 1995**



---

**Anna M. Avrigian and Mark I. Farber**

U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Southeast Fisheries Science Center  
75 Virginia Beach Drive  
Miami, FL 33149

November 1996

NOAA Technical Memorandum  
NMFS-SEFSC-392

**BIG GAME FISHING IN THE NORTHERN GULF OF MEXICO  
DURING 1994 and 1995**

by

**Anna M. Avrigian and Mark I. Farber**



U.S. DEPARTMENT OF COMMERCE  
Mickey Kantor, Secretary

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
D. James Baker, Under Secretary for Oceans and Atmosphere

NATIONAL MARINE FISHERIES SERVICE  
Rolland A. Schmitten, Assistant Administrator for Fisheries

November 1996

This Technical Memorandum series is used for documentation and timely communication of preliminary results, interim reports, or similar special-purpose information. Although the memoranda are not subject to complete formal review, editorial control, or detailed editing, they are expected to reflect sound professional work.

## NOTICE

---

The National Marine Fisheries Service (NMFS) does not approve, recommend or endorse any proprietary product or material mentioned in this publication. No reference shall be made to NMFS, or to this publication furnished by NMFS, in any advertising or sales promotion which would indicate or imply that NMFS approves, recommends, or endorses any proprietary product or proprietary material mentioned herein or which has as its purpose any intent to cause directly or indirectly the advertised product to be used or purchased because of this NMFS publication.

This report should be cited as follows:

**Avrigian, A.M. and M.I. Farber, 1996. Big Game Fishing in the Northern Gulf of Mexico During 1994-1995. NOAA Technical Memorandum NMFS-SEFSC-392, 13p.**

This publication is contribution MIA-93/94-07 from the Southeast Fisheries Science Center, Miami Laboratory, Migratory Fishery Biology Division.

Copies may be obtained by writing:

National Marine Fisheries Service  
Southeast Fisheries Science Center  
Panama City Laboratory  
3500 Delwood Beach Road  
Panama City, FL 32408

or

National Technical Information Service  
5258 Port Royal Road  
Springfield, VA 22161

---

## INTRODUCTION

The U.S. Fish and Wildlife Service first identified billfishes (blue marlin, *Makaira nigricans*; white marlin, *Tetrapturus albidus*; sailfish, *Istiophorus platypterus*; swordfish, *Xiphias gladius*; and longbill spearfish, *Tetrapturus pfluegeri*) as an abundant species grouping in the northern Gulf of Mexico in the mid 1950s. Big game fishing gained popularity in the 1960s when clubs dedicated to this sport began to be established.

The New Orleans Big Game Fishing Club was the first of the sport fishing clubs to be formed in the northern Gulf of Mexico in 1961. The New Orleans

Club kept accurate records of their fishing activities and these records provided the information used by the National Marine Fisheries Service (NMFS) in the first analysis of billfish relative abundance in the northern Gulf of Mexico. A summary report<sup>2</sup>, "An Analysis of the Catches and the Biology of Big Game Fishes Caught by the New Orleans Big Game Fishing Club, 1966-70," was produced from the records of the New Orleans Club. In 1971, scientists at the NMFS, with the cooperation and support of sport anglers, began the Recreational Billfish Survey (RBS) to study and monitor this fishery.

<sup>2</sup> E. Nakamura, Eastern Gulf Sport Fishery Marine Laboratory, Panama City, FL, 1971.

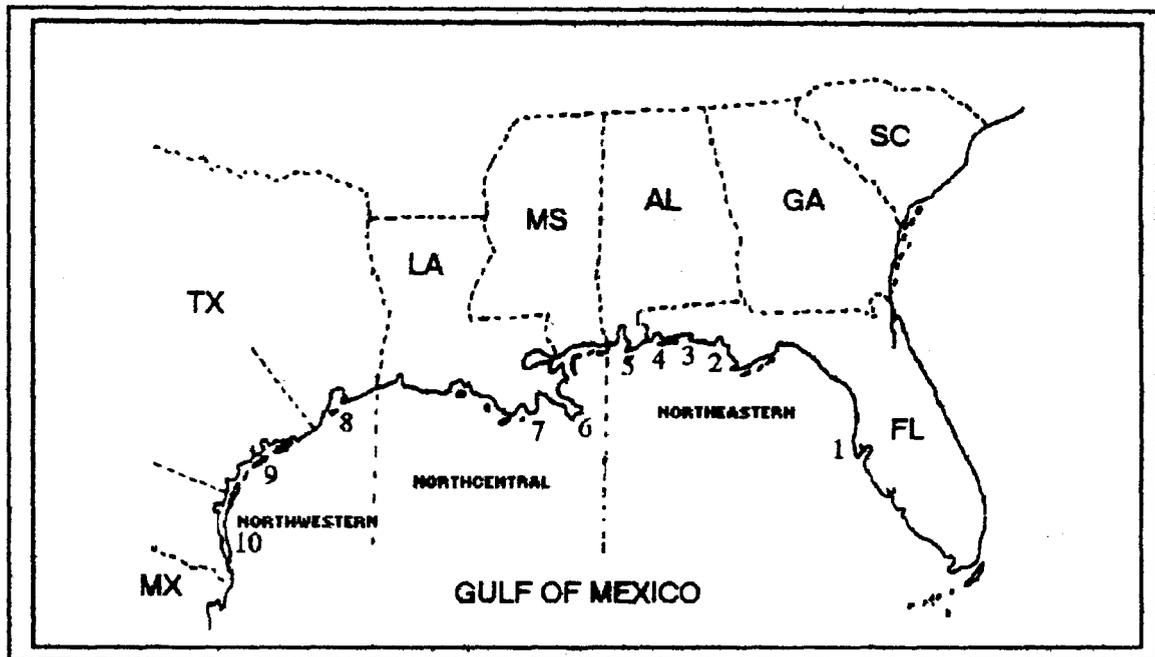


Figure 1. Tournament ports sampled by the Recreational Billfish Survey (RBS), in the northern Gulf of Mexico, 1994 and 1995.

- |                       |                   |
|-----------------------|-------------------|
| 1. St. Petersburg, FL | 6. South Pass, LA |
| 2. Panama City, FL    | 7. Grand Isle, LA |
| 3. Destin, FL         | 8. East Texas     |
| 4. Pensacola, FL      | 9. Central Texas  |
| 5. Mobile, AL         | 10. South Texas   |

Reliable data on the relative abundance of billfishes have been gathered and stored in a database file for 25 years. Dock sampling carried-out during the 1971-1992 seasons, and reported separately in the annual newsletters, is no longer funded. Therefore, since the 1992 season, sampling has been restricted to tournament fishing, the source of the majority of effort in the area. Though there have been a few changes in the survey in recent years due to budgetary constraints and to promote further efficiency of the program, this billfish database continues to be the most consistent and comprehensive of its kind. The Recreational Billfish Survey (RBS) produces an annual summary report, "Big Game Fishing in the Northern Gulf of Mexico," which is made available to those who are interested in the resource. This year's report includes data for both 1994 and 1995; however, the years are analyzed separately.

## SAMPLING METHODS

Throughout the billfishing tournament season (May through September) port samplers conduct interviews with the anglers at tournament sites in the northern Gulf of Mexico to collect data on billfishing catch and effort, techniques and baits; they also collect biological samples from the billfishes for various ongoing studies. Recreational anglers also voluntarily report information by phone or mail regarding their big game fishing trips. These data provide information that is used in stock assessment and estimates of minimum recreational billfish landings used in fisheries management decisions.

Analyses are generally summarized for the northwestern (NW), northcentral (NC), and northeastern (NE) regions of the Gulf of Mexico (Figure 1). Tournament ports sampled during the 1994 and 1995 seasons in the NE area include St. Petersburg, Panama City, Destin, and Pensacola, in FL, and Orange Beach, AL; ports sampled in the NC area include South Pass and Grand Isle in LA; ports sampled in the NW area include Freeport (East TX), Port Aransas and Port O'Connor (Central TX), and Port Mansfield and South Padre Island in (South TX).

## CATCH AND EFFORT

The total effort recorded by the port samplers in the northern Gulf of Mexico was 20,962 hr for the 1995

season (Table 1a) and 21,078 hr for the 1994 season (Table 1b). The livebait and drifting effort account for less than 2% of the total effort in either year. The actual hours of effort used in calculations are net-hours-trolled based on total hours (i.e., gross-hours-trolled) minus fight time, taking into consideration that when a billfish is fighting generally fishing does not continue. Therefore, any discussion or reference to effort throughout the remainder of this report refers to net-hours-trolled unless otherwise stated. These values may reflect sampling intensity, as well as fishing activity.

There was about 13% more effort recorded in both the 1995 and 1994 seasons than was sampled in 1993. During the 1995 season, about 47% of the total recorded effort in the northern Gulf of Mexico was in the NE area; 30% in the NC area; and 23% in the NW area. About 50% of the total recorded effort sampled during the 1994 season in the northern Gulf of Mexico was in the NE area, 28% in the NC area, and 22% was in the NW area.

During the 1995 season, there were 1,260 billfishes reported as hooked: 156 were boated, 509 were released (only 9% were released without being tagged), and 595 were lost. Of the 665 billfishes reported as caught (i.e., boated or released) during the 1995 season in the northern Gulf of Mexico, about 59% were blue marlin, 27% were white marlin, 14% were sailfish, and <1% were spearfish (2 fish) -- both tagged and released (Table 1a). These numbers of billfishes include small numbers of catch-only landings data where no effort was recorded, and some recorded effort (<2% of total effort) using methods of fishing other than trolling (i.e. driftfishing and livebaiting).

There were 1,192 billfishes reported as hooked in the northern Gulf of Mexico during the 1994 season: 180 were boated, 546 were released (only 8% were released without being tagged), and 466 were lost. Of the 726 billfishes reported as caught (i.e., boated or released) in 1994, about 55% were blue marlin, 33% were white marlin, 11% were sailfish, and 1% were spearfish (5 fish) -- all tagged and released (Table 1b).

In 1988, the percentage of billfishes released exceeded 50% of the total catch for the first time during the RBS study (Figure 2). During 1990-1992,

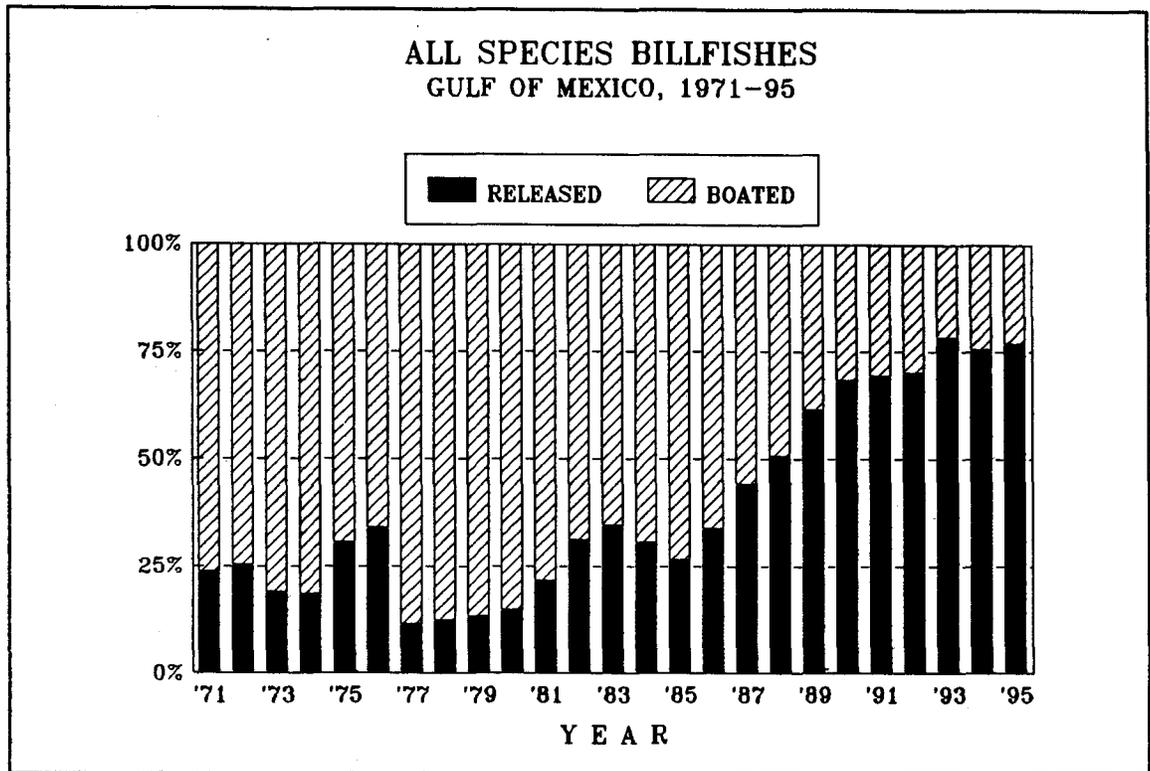
Table 1a.

For 1995, total hours of effort, by area, and billfishes Hooked (H), Boated (B) and Released (R) in the northern Gulf of Mexico, including billfishes with no effort recorded or effort other than trolling. Ports sampled are listed under the area with the percentage of effort contributed to the total area effort. Hooked billfishes include boated, released, and lost fish. Two spearfish were tagged and released, and are not included in this table.

Area	Total Effort	Blue Marlin			White Marlin			Sailfish			Total 3 species			
		Port	% Area	H	B	R	H	B	R	H	B	R		
<b>Northeast Gulf</b>	<b>9,824</b>		<b>227</b>	<b>42</b>	<b>71</b>	<b>196</b>	<b>24</b>	<b>66</b>	<b>25</b>	<b>9</b>	<b>5</b>	<b>448</b>	<b>75</b>	<b>142</b>
St. Petersburg	10.7%		19	8	5	3	0	2	1	1	0	23	9	7
Panama City	20.2%		41	10	10	44	3	15	13	4	3	98	17	28
Destin	7.6%		17	2	4	13	1	3	3	1	0	33	4	7
Pensacola	30.4%		80	13	19	78	16	23	5	2	0	163	31	42
Mobile	31.1%		70	9	33	58	4	23	3	1	2	131	14	58
<b>Northcentral Gulf</b>	<b>6,342</b>		<b>340</b>	<b>15</b>	<b>153</b>	<b>89</b>	<b>0</b>	<b>36</b>	<b>14</b>	<b>0</b>	<b>9</b>	<b>443</b>	<b>15</b>	<b>198</b>
Grand Isle	7.2%		14	2	5	0	0	0	1	0	1	15	2	6
South Pass	92.8%		326	13	148	89	0	34	13	0	7	428	13	189
<b>Northwest Gulf</b>	<b>4,796</b>		<b>195</b>	<b>30</b>	<b>77</b>	<b>83</b>	<b>9</b>	<b>45</b>	<b>89</b>	<b>27</b>	<b>45</b>	<b>367</b>	<b>66</b>	<b>167</b>
East Texas	10.4%		31	6	13	7	3	1	11	3	1	49	12	15
Central Texas	25.9%		95	18	36	18	5	10	15	4	8	128	27	54
South Texas	63.7%		69	6	28	56	1	34	63	20	36	188	27	98
<b>All Areas Total</b>	<b>20,962</b>		<b>762</b>	<b>87</b>	<b>301</b>	<b>368</b>	<b>33</b>	<b>147</b>	<b>128</b>	<b>36</b>	<b>59</b>	<b>1,258</b>	<b>156</b>	<b>507</b>

**Table 1b.** For 1994, total hours of effort, by area, and billfishes Hooked (H), Boated (B) and Released (R) in the northern Gulf of Mexico, including billfishes with no effort recorded or effort other than trolling. Ports sampled are listed under the area with the percentage of effort contributed to the total area effort. Hooked billfishes include boated, released, and lost fish. Five spearfish were tagged and released, and are not included in this table.

Area	Total Effort	Blue Marlin			White Marlin			Sailfish			Total 3 species			
		Port	% Area	H	B	R	H	B	R	H	B	R		
<b>Northeast Gulf</b>	<b>10,466</b>		<b>241</b>	<b>51</b>	<b>79</b>	<b>227</b>	<b>36</b>	<b>86</b>	<b>35</b>	<b>12</b>	<b>11</b>	<b>503</b>	<b>99</b>	<b>176</b>
St. Petersburg	13.8%		8	2	0	10	2	1	10	4	0	28	8	1
Panama City	19.1%		27	6	9	27	6	8	4	2	1	58	14	18
Destin	10.0%		25	7	5	18	4	5	1	1	0	44	12	10
Pensacola	30.9%		117	17	49	105	19	42	16	2	9	238	38	100
Mobile	26.2%		64	19	16	67	5	30	4	3	1	135	27	47
<b>Northcentral Gulf</b>	<b>5,766</b>		<b>264</b>	<b>15</b>	<b>141</b>	<b>55</b>	<b>2</b>	<b>19</b>	<b>7</b>	<b>0</b>	<b>5</b>	<b>326</b>	<b>17</b>	<b>165</b>
Grand Isle	14.0%		44	1	14	9	1	3	2	0	1	55	2	18
South Pass	86.0%		220	14	127	46	1	16	5	0	4	271	15	147
<b>Northwest Gulf</b>	<b>4,846</b>		<b>181</b>	<b>35</b>	<b>82</b>	<b>115</b>	<b>11</b>	<b>83</b>	<b>62</b>	<b>18</b>	<b>35</b>	<b>358</b>	<b>64</b>	<b>200</b>
East Texas	16.0%		29	19	10	7	1	6	2	2	0	38	22	16
Central Texas	25.8%		65	11	27	28	3	18	16	3	5	109	17	50
South Texas	58.2%		85	5	45	76	7	59	44	10	30	205	22	134
<b>All Areas Total</b>	<b>21,078</b>		<b>686</b>	<b>101</b>	<b>302</b>	<b>397</b>	<b>49</b>	<b>188</b>	<b>104</b>	<b>30</b>	<b>51</b>	<b>1,187</b>	<b>180</b>	<b>541</b>



**Figure 2.** Percentage of billfishes boated vs. released in the northern Gulf of Mexico, 1971-95. Includes catches with technique other than trolling and catches with no effort recorded.

releases for the northern Gulf of Mexico have exceeded 65% of the annual recreational catch; and since 1993, releases have exceeded 75%. This high release rate is interpreted to indicate a genuine concern for the resource by sport anglers as well as reflect the enactment of various state regulations and the 1988 U.S. Fishery Management Plan for Atlantic Billfishes. The release ratio, calculated by region (Figure 3), was the highest in the northcentral Gulf of Mexico with 93% released in 1995 and 91% in 1994; followed by the northwest area with 72% released in 1995 and 76% in 1994; and then the northeast Gulf of Mexico with 65% released in 1995 and 64% in 1994.

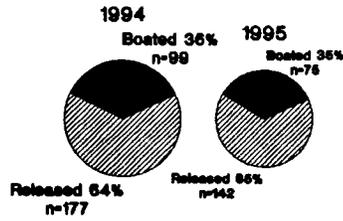
### INDICES OF RELATIVE ABUNDANCE

Hook-Per-Unit-Effort (HPUE), the index of relative abundance used in the Gulf of Mexico Billfish Survey, is calculated by dividing the number of billfishes hooked by the effort (i.e., hours-trolled).

A "hooked" billfish is a billfish that is boated, released, tagged and released, or lost after identification was made. Catch-Per-Unit-Effort (CPUE), most frequently used in other studies because data on lost fish and/or fighting time is often not available, is calculated by dividing the number of "caught" billfishes by gross-hours-trolled. The HPUE index is considered by some a more refined indicator of relative abundance than CPUE because the large game fishes are often hooked and lost, and therefore not included in catches. The HPUE index may be used only when there is sufficiently detailed information on lost fishes that allows for a further refinement in the relative abundance index.

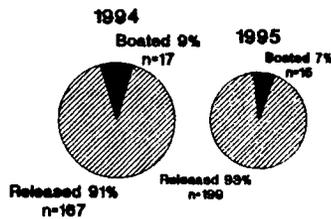
Catches with no effort information are recorded to better estimate the total number of landed billfishes. The HPUE is calculated separately for effort using fishing techniques other than trolling to indicate the effectiveness of the technique (Table 2); however,

NORTHEAST



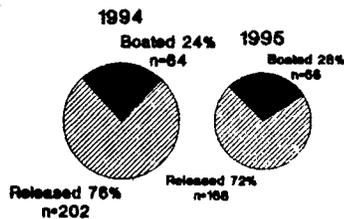
(a)

NORTHCENTRAL



(b)

NORTHWEST



(c)

**Figure 3.** Billfishes released by area in the (a) northeast, (b) northcentral, and (c) northwest Gulf of Mexico, 1994 and 1995. Includes all catches without regard to effort.

only trolling effort during billfishing tournaments is used in the HPUE trends chart of relative abundance, since trolling is the dominant method of fishing in this fishery.

In 1995, the HPUE for blue marlin caught during tournament fishing was 3.5 fish per unit 100 hr trolling effort (Table 2a and Figure 4a). This was the highest HPUE since 1973 (Figure 4a). In 1994, the HPUE for blue marlin was 2.9 fish per 100 hr effort, up from 2.3 fish per 100 hr effort in 1993 (Table 2b). The increasing trend in blue marlin HPUE has now continued from 1991 through 1995. Blue marlin have exhibited the most stable HPUE of the three species in the RBS study. Excluding the lowest value (1.6) in 1972 and the highest value (3.7) in 1973, the HPUE has ranged from 2.0 to 3.5 blue marlin per 100 hr effort over the period 1974-1995, with a 25 yr average of 2.5 blue marlin per 100 hr trolling effort.

The HPUE for white marlin caught in tournament fishing in 1995 was 1.8 fish per 100 hr effort, the highest since 1988 (Table 2a and Figure 4b). In 1994, HPUE was 1.7 fish per 100 hr effort, up from 0.85 in 1993 (Table 2b). The white marlin HPUE index has fluctuated most of all the species of billfishes in the RBS study. The HPUE fluctuated broadly over the period 1972-1983, often following an increasing/decreasing pattern. From 1983 through 1989, the trend was generally decreasing from 5.4 to 0.82 white marlin per 100 hr effort, historically the lowest HPUE in the RBS study. The average HPUE over the entire RBS study is 2.9 white marlin per 100 hr trolling effort.

The HPUE for sailfish caught in tournament fishing in 1995 was 0.6 fish per 100 hr effort, slightly up from the 0.4 in 1994 (Table 2a and Figure 4c). Sailfish HPUE, except for several years in the early 1970s, has maintained the lowest HPUE of all species of billfishes in the RBS study. With the exception of 3 years (1980, 1981, and 1983), the HPUE has been 1.0 or less over the last 18 years (i.e., 1978-1995), with a 25 yr average of 0.86 sailfish per 100 hr trolling effort.

Even though the effort data used to calculate HPUE are the same for all species of billfish, relative abundance should not be compared between species because bias can be introduced by the fishing tech-

**Table 2.** Catch and effort results by fishing technique for 1995 (a) and 1994 (b) in the northern Gulf of Mexico. The HPUE = number of billfishes hooked / net hrs effort \* 100 hrs, where Hooked (Hkd) = number of billfishes boated (Boat) + tagged and released (T/R) + lost; and net hrs effort = gross effort - fight time.

**(a) Catch Results by Technique for 47 Tournaments Sampled in 1995**

Species	Fishing Technique	# Billfishes Boat+T/R+Lost= Hkd.				Hook-Per-100 hr- Effort (HPUE)
Blue Marlin (BUM)	Trolling	79	257	368	704	3.5
	Livebait	4	3	6	13	9.5
White Marlin (WHM)	Trolling	31	142	188	361	1.8
	Livebait	2	0	0	2	1.5
Sailfish (SAI)	Trolling	36	56	33	125	0.6
Spearfish (SPR)	Trolling	0	2	0	2	0.0

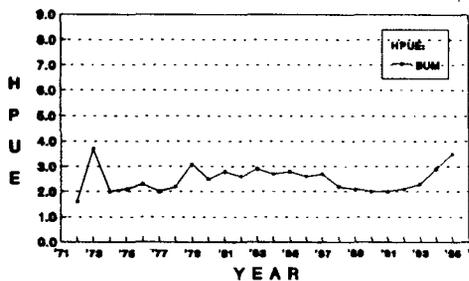
Technique	Gross Hrs.-Fighting= Net Hrs. Fished Hrs. Fished			No Effort Recorded	
	Boat	T/R		Boat	T/R
Trolling	20,783	427	20,356	BUM	41
Live Bait	143	7	136	WHM	5
Drifting	36	0	36	SAI	3

**(b) Catch Results by Technique for 51 Tournaments Sampled in 1994**

Species	Fishing Technique	# Billfishes Boat+T/R+Lost= Hkd.				Hook-Per-100 hr- Effort (HPUE)
Blue Marlin (BUM)	Trolling	82	220	279	581	2.9
	Livebait	7	6	4	17	4.7
White Marlin (WHM)	Trolling	42	149	160	351	1.7
	Livebait	1	0	0	1	0.3
Sailfish (SAI)	Trolling	22	38	22	82	0.4
	Drifting	1	0	0	1	0.0
	Livebait	1	0	1	2	0.6
Spearfish (SPR)	Trolling	0	4	0	4	0.0

Technique	Gross Hrs.- Fighting= Net Hrs. Fished Hrs. Fished			No Effort Recorded	
	Boat	T/R		Boat	T/R
Trolling	20,683	410	20,273	BUM	76
Live Bait	369	5	364	WHM	39
Drifting	26	1	25	SAI	13
				SPR	1

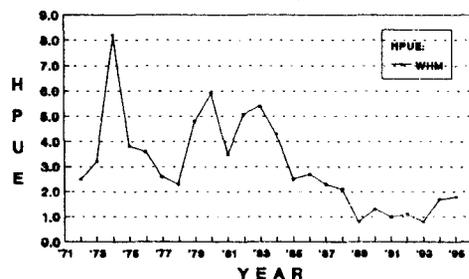
**BLUE MARLIN**  
Hooked-Per-100-hrs-trolling\*  
Gulf of Mexico, 1972-1995



\*Tournament data only

(a)

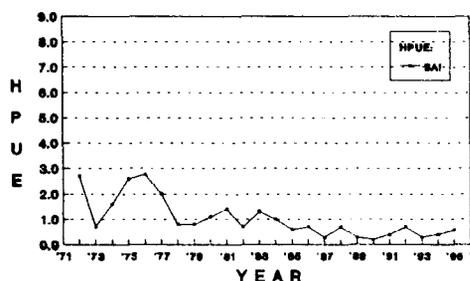
**WHITE MARLIN**  
Hooked-Per-100-hrs-trolling\*  
Gulf of Mexico, 1972-1995



\*Tournament data only

(b)

**SAILFISH**  
Hooked-Per-100-hrs-trolling\*  
Gulf of Mexico, 1972-1995



\*Tournament data only

(c)

**Figure 4.** Numbers of billfishes Hooked-Per-100-hrs-trolling (HPUE) in the northern Gulf of Mexico, 1971-1995.

nique. For instance, trolling farther off-shore at faster speeds with larger baits effectively targets the larger, more pelagic marlins and decreases chances of catching the smaller, and generally more coastal sailfish. Therefore, the stability in the blue marlin HPUE and the consistently low sailfish HPUE may reflect effort directed toward the larger marlins during multi-species, tournament fishing, as well as species relative abundance.

## WEIGHTS

Size data, in conjunction with other analyses, may be useful in analyzing the health or general status of a fishery. However, minimum size limits imposed by many tournaments, along with federal size regulations that went into effect in 1988, have strongly influenced the size of billfish brought to the docks. Therefore, when analyzing size data, one needs to be mindful of any bias that may result from these restrictions. Weights and numbers of billfishes landed by area, recorded in 1994 and 1995 for all fishing methods are presented in Table 3, with a summary for the entire northern Gulf of Mexico presented in Table 4, and comparable historical data for 1971-1995 in Figure 5.

The largest blue marlin sampled in 1995 was 759.5 lbs from Port O'Connor, TX; in 1994 the largest blue marlin was 709.0 lbs reported from Mobile, AL (Table 3). The average weight for the 87 blue marlin landed in 1995 was 368.4 lbs, the highest yearly average weights for blue marlin in the RBS study (Table 4). The yearly average weights for blue marlin has remained above 300 lbs since 1988 the year the Federal Management Plan was enacted with size limit regulations. The average weight for the 101 blue marlin boated in 1994 was 328.4 lbs, a decrease from the 1993 yearly average of 337.4 lbs (Figure 5a).

The largest white marlin sampled in 1995 was 90.3 lbs from Pensacola, FL; in 1994 the largest white marlin sampled was 84.5 lbs reported from Freeport, TX (Table 3). The average weight for the 33 white marlin boated in 1995 was 57.2 lbs and the average for the 47 white marlin boated in 1994 was 57.0 lbs (Table 4). These averages represent a slight decrease from the 1993 average of 57.8 lbs (Figure 5b).

Table 3. Summary of weights (lbs) by area for billfish recorded by the Recreational Billfish Survey in the northern Gulf of Mexico in 1994 and 1995. Includes all fish without regard to effort. Minimum, maximum, and average weights are given, as well as number of fish boated for each area and year.

Port: St. Petersburg, FL

Species	Min	Year: 1994			Min	Year: 1995		
		Max	Avg	#Boat		Max	Avg	#Boat
Blue Marlin	458.0	601.8	529.9	2	160.7	360.2	231.5	8
White Marlin	48.2	52.4	50.3	2	-	-	-	0
Sailfish	33.5	44.5	38.2	4	32.8	32.8	32.8	1

Port: Panama City Bch., FL

Species	Min	Year: 1994			Min	Year: 1995		
		Max	Avg	#Boat		Max	Avg	#Boat
Blue Marlin	250.5	455.7	331.2	6	256.5	644.5	435.9	10
White Marlin	51.2	63.6	57.7	6	51.0	61.1	55.9	3
Sailfish	45.0	45.0	45.0	1	46.0	62.5	53.3	4

Port: Destin, FL

Species	Min	Year: 1994			Min	Year: 1995		
		Max	Avg	#Boat		Max	Avg	#Boat
Blue Marlin	230.2	501.4	362.4	7	310.2	550.2	430.2	2
White Marlin	51.4	79.8	61.4	4	51.1	51.1	51.1	1
Sailfish	-	-	-	0	49.6	49.6	49.6	1

Port: Pensacola, FL

Species	Min	Year: 1994			Min	Year: 1995		
		Max	Avg	#Boat		Max	Avg	#Boat
Blue Marlin	202.0	541.3	346.3	16	200.7	606.5	357.8	13
White Marlin	48.5	70.8	55.8	18	48.0	90.3	57.2	16
Sailfish	42.3	49.0	45.7	2	34.3	35.5	34.9	2

Port: Mobile, AL

Species	Min	Year: 1994			Min	Year: 1995		
		Max	Avg	#Boat		Max	Avg	#Boat
Blue Marlin	200.0	709.0	348.0	15	254.2	691.6	346.0	9
White Marlin	48.4	57.6	54.4	4	52.2	65.2	58.0	4
Sailfish	41.2	52.2	45.3	3	45.0	45.0	45.0	1

Table 3. continued

## Port: Grand Isle, LA

Species	Year: 1994				Year: 1995			
	Min	Max	Avg	#Boat	Min	Max	Avg	#Boat
Blue Marlin	289.5	289.5	289.5	1	405.8	512.2	459.0	2
White Marlin	50.9	50.9	50.9	1	-	-	-	0
Sailfish	-	-	-	0	-	-	-	0

## Port: South Pass, LA

Species	Year: 1994				Year: 1995			
	Min	Max	Avg	#Boat	Min	Max	Avg	#Boat
Blue Marlin	175.0	543.2	339.7	9	181.0	688.5	457.5	9
White Marlin	46.1	46.1	46.1	1	-	-	-	0
Sailfish	-	-	-	0	-	-	-	0

## Port: Freeport, TX

Species	Year: 1994				Year: 1995			
	Min	Max	Avg	#Boat	Min	Max	Avg	#Boat
Blue Marlin	198.0	369.5	268.5	19	182.0	743.5	352.5	6
White Marlin	84.5	84.5	84.5	1	55.0	70.5	62.7	3
Sailfish	44.0	51.0	47.5	2	39.0	49.5	46.0	3

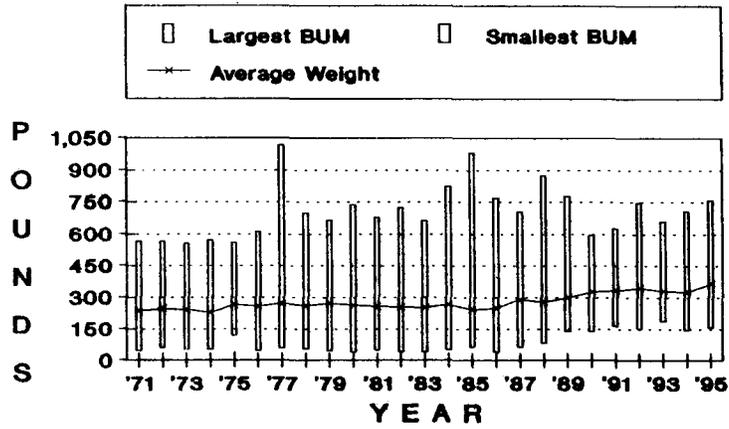
## Port: Port O'Connor &amp; Port Aransas, TX

Species	Year: 1994				Year: 1995			
	Min	Max	Avg	#Boat	Min	Max	Avg	#Boat
Blue Marlin	146.7	608.5	294.3	11	156.4	759.5	347.3	18
White Marlin	50.0	61.3	56.8	3	48.0	65.0	57.7	5
Sailfish	41.8	48.0	44.3	6	44.5	73.8	55.8	4

## Port: South Padre Island, TX

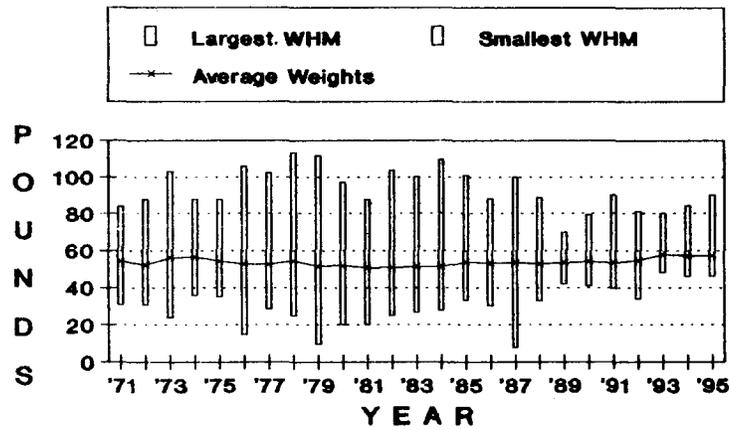
Species	Year: 1994				Year: 1995			
	Min	Max	Avg	#Boat	Min	Max	Avg	#Boat
Blue Marlin	226.0	518.0	339.7	3	231.0	474.0	360.7	6
White Marlin	48.8	66.5	58.4	3	46.0	46.0	46.0	1
Sailfish	28.0	52.4	36.7	5	29.5	61.5	39.9	20

## BLUE MARLIN



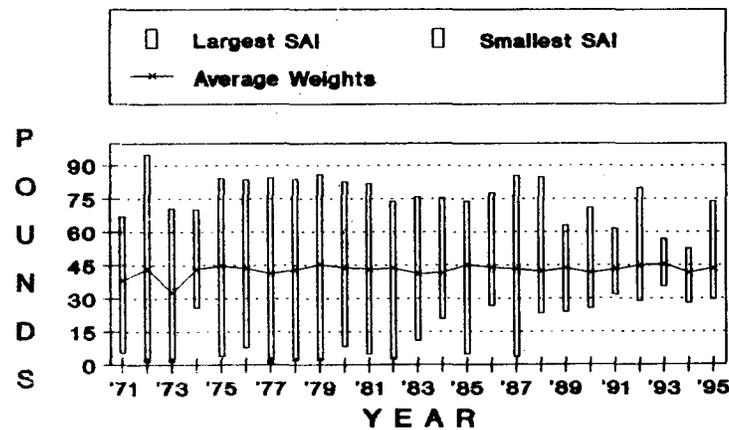
(a)

## WHITE MARLIN



(b)

## SAILFISH



(c)

Figure 5. Largest, smallest, and average weights for blue marlin (BUM), white marlin (WHM), and sailfish (SAI) caught in the northern Gulf of Mexico, 1971-95. Includes recorded all catches without regard to effort.

**Table 4.** Summary of weights (lbs) for billfish recorded by the Recreational Billfish Survey in the northern Gulf of Mexico in 1995 and 1994. Includes all fish without regard to effort. Minimum, maximum, and average weights are given, as well as number of fish boated for each area and year.

Year: 1995

Species	Min	Max	Avg	#Boated
Blue Marlin	156.4	759.5	368.4	87
White Marlin	46.0	90.3	57.2	33
Sailfish	29.5	73.8	43.6	36

Year: 1994

Species	Min	Max	Avg	#Boated
Blue Marlin	146.7	709.0	328.4	101
White Marlin	46.1	84.5	57.0	47
Sailfish	28.0	52.4	41.6	30

The largest sailfish sampled in 1995 was 73.8 lbs reported from Port O'Connor, TX; in 1994 the largest sailfish was 52.4 lbs reported from South Padre Island, TX (Table 3). The average weight for the 36 sailfish boated in 1995 was 43.6 lbs (Table 4). The average weight for the 30 sailfish boated in 1994 was 41.6 lbs, a decrease from the 1993 average of 45.5 lbs (Figure 5c).

#### ACKNOWLEDGMENTS

Approximately 2,145 interviews were conducted during the 1995 season and 2,220 interviews were

conducted during the 1994 season. For a job *WELL DONE*, we thank: Wm. "Hank" Geier, Jr., South Padre Island, TX; Mark Christi, Destin, FL; Vonnie Dunn, Port Aransas, TX; Craig Martin and Keith Johanson (volunteer) Pensacola, FL/Mobile, AL; and Joe Yurt, South Pass, LA.

The National Marine Fisheries Service's billfishing survey has received considerable support from the recreational fishing community. Recreational fishery constituents have provided both indirect and direct assistance to assure a successful outcome of this study. This support is gratefully appreciated, and we thank those who helped (Appendix 1).

Appendix 1. Persons and tournament organizations that actively assisted the NMFS Recreational Billfishing Survey in the northern Gulf of Mexico during the 1994 and/or 1995 fishing seasons.

---

	NameLocation
Anchorage Ladies Tournament	Panama City, FL
George Ballard	Pensacola, FL
Baton Rouge Big Game Fishing Club	Baton Rouge, LA
Bonnie Boozer	Pensacola, FL
Bay Point Invitational Tournament	Panama City, FL
Blue Marlin Classic Tournament	Perdido Key, FL
Florida West Coast Championship Tournaments	Tierra Verde, FL
Fort Walton Beach Sailfish Club	Ft. Walton Beach, FL
Nancy Hanna	Pensacola, FL
Ed Medley	Tierra Verde, FL
Kandy Nance	St. Petersburg, FL
Mobile Big Game Fishing Club	Mobile, AL
New Orleans Big Game Fishing Club	New Orleans, LA
Pensacola Big Game Fishing Club	Pensacola, FL
Poco Bueno Tournament	Port O'Connor, TX
Poor Man's Tournament	Panama City, FL
Donnie Rozier	Pensacola, FL
Bonnie Yaste	Pensacola, FL

---