

BILLFISH SPORT FISHERY OFF BRAZILIAN COAST

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SUMMARY

Recreational tournament anglers, using rod and reel, from 1971-92 caught sailfish (*Istiophorus platypterus*), dolphin (*Coryphaena hippurus*), yellowfin tuna (*Thunnus albacares*), skipjack (*Katsuwonus pelamis*), blue marlin (*Makaira nigricans*), wahoo (*Acanthocybium solandri*) and white marlin (*Tetrapturus albidus*) as their main target species. They also caught the following species in small numbers: albacore (*Thunnus alalunga*), blackfin tuna (*Thunnus atlanticus*), Atlantic little tuna (*Euthynnus alletteratus*) and different species of sharks (*Carcharhinus spp.*). These tournaments took place in the yacht clubs of Rio de Janeiro city - Rio de Janeiro State, Vitória city - Espírito Santo State and Ilha Bela city - São Paulo State, from October to February (summer).

RESUME

Les pêcheurs sportifs utilisant la canne /moulinet, et qui prennent part à des championnats, ont capturé entre 1971 et 1992 du voilier (*Istiophorus platypterus*), des coryphènes (*Coryphaena hippurus*), de l'albacore (*Thunnus albacares*), du listao (*Katsuwonus pelamis*), du makaire bleu (*Makaira nigricans*), du thazard bâtard (*Acanthocybium solandri*) et du makaire blanc (*Tetrapturus albidus*), qui sont les principales espèces qu'ils recherchent. Ils ont également capturé de petites quantités des espèces suivantes: germon (*Thunnus alalunga*), thon à nageoires noires (*Thunnus atlanticus*), thonine (*Euthynnus alletteratus*), et diverses espèces de requins (*Carcharhinus spp.*). Ces championnats ont eu lieu d'octobre à février (été) au Yacht Clubs de Rio de Janeiro, Etat de Rio de Janeiro, de Vitoria, Etat d'Espírito Santo, et d'Ilha Bela, Etat de Sao Paulo.

RESUMEN

En el período 1971-92, los pescadores de torneos de recreo, usando caña y carrete capturaron pez vela (*Istiophorus platypterus*), dorado (*Coryphaena hippurus*), rabil (*Thunnus albacares*), listado (*Katsuwonus pelamis*), aguja azul (*Makaira nigricans*), peto (*Acanthocybium solandri*) y aguja blanca (*Tetrapturus albidus*), como objetivo principal. También, en escasos números, capturaron las siguientes especies: atún blanco (*Thunnus alalunga*), atún aleta negra (*Thunnus atlanticus*), bacoreta (*Euthynnus alletteratus*) y varias especies de tiburón (*Carcharhinus spp.*). Estos torneos tuvieron lugar en los clubs náuticos de Rio de Janeiro (Estado de Rio de Janeiro), Vitoria (Estado de Espírito Santo) e Ilha Bela (Estado de Sao Paulo), de octubre a febrero (verano).

1. INTRODUCTION

Offshore recreational fishing tournaments are practiced along all Brazilian coasts, although it is concentrated mainly near Rio de Janeiro, Vitória and Ilha Bela cities from October to February (summer). Offshore tournaments in Brazil began in 1963/64 at the "Iate Clube do Rio de Janeiro" and in 1969/70 at the "Iate Clube de Vitória". Catch and effort statistics of this activity are available from the yacht club of Rio de Janeiro from 1969-1990 and from Iate Club Vitória for 1990.

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The most important fishing areas were off Rio de Janeiro between "Cabo Frio" and "Ilha Grande" under influence of Cabo Frio upwelling, with surface temperatures from 22° and 24° C (Paiva and Pires-Junior, 1983).

The main goal of this paper is to present the available catch, effort, and biological data from offshore recreational fishing tournaments off the Brazilian coast.

2. AVAILABLE DATA

Data from the Yacht Club of Rio de Janeiro were obtained from its Fishery Department and from Paiva and Pires-Junior (1983). Likewise, data from Yacht Club of Vitória were obtained from Jorge et al., (In press) and from Yacht Club of Ilha Bela and its Fishery Department.

The species caught from Yacht Club of Rio de Janeiro by season in number of fish are shown in Table 1 and in weight in Table 2. Sailfish dominated the tournament catches of billfish throughout the entire time series, blue marlin were second, with white marlin third in abundance (Table 1). The total weight of tournament caught billfishes followed a similar pattern (Table 2). The number of boats by season are shown in Table 3 and has stabilized at between 50-60 yachts per season but occasionally goes over 70 yachts in any given year. The number of anglers per yacht ranged from 4 to 6 people.

The number of billfish caught at a tournament at Yacht Club of Vitória is shown in Table 4 and the average length and weight of billfish caught at this tournament by sex are in Table 5.

The number of boats from 1991/92 tournament Yacht Club of Ilha Bela was 38. It is interesting to note that white marlin dominated the catches for Yacht Club Vitória during the 1990/91 season (Table 4). Male white marlin were more abundant than females (Table 4) but the average length and weight of females were slightly larger than the males (Table 5). The trend for larger females also was true for sailfish and blue marlin catches (Table 5).

3. LITERATURE CITED

- PAIVA, M. P. and O. C. PIRES-JUNIOR. 1983. Temporadas de pesca esportiva e oceânica, ao largo do Estado do Rio de Janeiro (Brasil). *Boletim de Ciências do Mar*, n° 38, LABOMAR, Fortaleza, 1-12.
- JORGE, L. A., L. M. REIS, L. J. SIK, L. R. MELO and L. T. JORGE. In press. Informações preliminares sobre a pesca do peixe de bico no litoral do Estado do Espírito Santo. IBAMA (datilografado):1-18.

Table 1. Sport fishing catches (in number of fish) of Yacht Club of Rio de Janeiro from 1969/70 to 1991/92 fishing season. Species include: sailfish (SAI), white marlin (WHM), blue marlin (BUM), yellowfin tuna (YFT), albacore (ALB), blackfin tuna (BLF), skipjack tuna (SKJ), dolphin (DOLF), wahoo (WAH) and sharks (SHAR).

SEASON/ YEAR	SPECIES										TOTAL
	SAI	WHM	BUM	YFT	ALB	BLF	SKJ	DOLF	WAH	SHAR	
1969/70	226	1	7	10	0	0	6	1837	7	7	2101
1970/71	284	2	24	95	5	0	13	597	18	5	1043
1971/72	130	1	8	77	1	2	6	1620	13	1	1859
1972/73	317	10	16	24	1	4	25	783	20	1	1201
1973/74	272	2	10	18	0	3	14	1082	42	3	1446
1974/75	719	1	17	234	0	1	28	1196	26	1	2223
1975/76	1440	0	8	168	0	0	14	388	13	1	2032
1976/77	656	8	11	293	0	0	35	2091	3	0	3097
1977/78	1052	8	14	123	0	0	28	2562	11	0	3798
1978/79	1006	5	16	68	0	1	42	3074	2	1	4215
1979/80	1506	0	12	20	0	0	12	564	0	1	2115
1980/81	2195	2	16	227	0	0	14	1607	0	0	4061
Subtotal	9803	40	159	1357	7	11	237	17401	155	21	29191
1981/82	1012	2	4								
1982/83	805	1	26								
1983/84	1387	3	5								
1984/85	976	5	10								
1985/86	1573	4	11								
1986/87	1422	1	2								
1987/88	1122	1	5								
1988/89	1177	19	1								
1989/90	2028	7	6								
1990/91	1201	7	9								
1991/92	1369	7	5								
Total	23875	97	243								

Table 2. Sport fishing catches (in weight, kg) of Yacht Club of Rio de Janeiro from 1969/70 to 1991/92 fishing season. Species include: sailfish (SAI), white marlin (WHM), blue marlin (BUM), yellowfin tuna (YFT), albacore (ALB), blackfin tuna (BLF), skipjack tuna (SKJ), dolphin (DOLF), wahoo (WAH) and sharks (SHAR).

SEASON/ YEAR	SPECIES										TOTAL
	SAI	WHM	BUM	YFT	ALB	BLF	SKJ	DOLF	WAH	SHAR	
1969/70	5982	36	943	350	0	0	33	13335	153	289	21121
1970/71	7118	73	2349	1203	50	0	64	3930	332	346	15465
1971/72	4236	18	812	1371	27	12	30	12620	227	65	19418
1972/73	8409	340	1710	432	3	21	150	7917	359	57	19398
1973/74	7134	80	768	266	0	12	96	8921	439	304	18020
1974/75	18901	34	1583	2658	0	5	262	9670	515	80	33708
1975/76	36904	0	738	1596	0	0	7214	3466	257	66	43099
1976/77	17173	238	932	4209	0	0	230	19570	47	0	42399
1977/78	28865	338	1238	1280	0	0	159	15372	204	0	47456
1978/79	27845	207	1665	932	0	7	222	24835	33	75	55821
1979/80	38971	0	1392	108	0	0	79	5885	0	54	45989
1980/81	57341	46	1619	2957	0	0	82	14713	0	0	76758
Subtotal	258879	1410	15749	17362	80	57	1479	139734	2566	1336	438652
1981/82	26725	71	396								
1982/83	21259	35	396								
1983/84	36628	106	495								
1984/85	25774	176	991								
1985/86	41540	141	1090								
1986/87	37552	35	198								
1987/88	29630	35	495								
1988/89	31082	670	99								
1989/90	53556	247	594								
1990/91	31716	247	891								
1991/92	36153	247	495								
Total	630494	3420	21889								

Table 3. Number of yachts by fishing season from 1969/70 to 1991/92 of Yacht Club of Rio de Janeiro.

Season/Year	Number Yacht	Season	Number Yacht
1969/70	39	1981/82	47
1970/71	38	1982/83	53
1971/72	52	1983/84	76
1972/73	65	1984/85	53
1973/74	70	1985/86	56
1974/75	81	1986/87	51
1975/76	78	1987/88	45
1976/77	75	1988/89	58
1977/78	76	1989/90	72
1978/79	71	1990/91	69
1979/80	60	1991/92	64
1980/81	72		

Table 4. Sport fishing catches (number of fish) of billfish by sex from Yacht Club of Vitória in December 1990. Sailfish (SAI), white marlin (WHM), and blue marlin (BUM) are given.

Species Date	SAI		WHM		BUM	
	male	female	male	female	male	female
12/01/90	0	1	23	5	0	0
12/08/90	7	8	18	0	2	2
12/13/90	8	4	48	3	0	1
12/20/90	8	4	13	6	1	0
Total	23	17	102	14	3	3

Table 5. Average length (eye-orbit fork length) and weight (kg) of billfish by sex from Yacht Club of Vitória in December 1990.

Length-cm Date	SAI		WHM		BUM	
	male	female	male	female	male	female
12/01/90	0	2.30	2.41	2.57	0	0
12/08/90	2.20	2.26	2.18	0	2.30	2.98
12/13/90	2.20	2.29	2.19	2.24	0	3.15
12/20/90	2.27	2.30	2.22	2.33	2.60	0

Weight-kg Date	SAI		WHM		BUM	
	male	female	male	female	male	female
12/01/90	0	0	0	0	0	0
12/08/90	23.1	27.9	26.0	0	34.7	106.4
12/13/90	24.0	25.7	26.5	27.0	0	130.0
12/20/90	24.2	28.6	26.9	33.4	76.0	0