

JAMAICAN RECREATIONAL AND ARTISANAL BILLFISH CATCHES. AN UPDATE, INCLUDING THE 1988-89 REPORT

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SUMMARY

A summary of the recreational and artisanal fishery for billfish is provided, particularly the details for the last two years. Average weights of the blue marlin landed in the recreational fishery reached historical lows (below 50 kg) during 1988 and 1989. Shore-based sampling for the ICCAT billfish program resulted in size frequency data from 392 blue marlin for 1989. Four blue marlin were tagged, injected with oxytetracycline, and released during October, 1989, as part of an effort to validate the accuracy of aging methods for this species. The ICCAT budget for Jamaica is reviewed and needs for the coming year are indicated. The Port Antonio Billfish Tournament donated \$1,000.00 (U.S.) to the ICCAT billfish program for 1990.

RESUMEN

Se facilita un resumen de la pesquería recreativa y artesanal de marlin, detallando en particular los dos últimos años. El peso medio de la aguja azul desembarcada en la pesquería recreativa alcanzó una baja histórica (menos de 50 kg) durante 1988 y 1989. El muestreo en la orilla del programa ICCAT de marlines dio como resultado datos de 392 ejemplares de aguja azul en 1989. Se marcaron cuatro agujas azules, inyectadas con oxytetraciclina, que fueron liberadas durante octubre de 1989, como parte de un esfuerzo en validar la precisión de los métodos de determinación de la edad para estas especies. Se revisa el presupuesto de ICCAT para Jamaica, y se indican las necesidades para el año próximo. El "Port Antonio Billfish Tournament" donó 1,000.00 \$ USA al programa ICCAT de marlines para 1990.

RESUME

Un résumé de la pêche sportive et artisanale d'istiophoridés est fourni, en particulier pour les deux dernières années. En 1988 et 1989, le poids moyen du makaira bleu qui débarque dans la pêche sportive a atteint des baisses historiques (en-dessous de 50 kg). En 1989, l'échantillonnage à terre du programme ICCAT istiophoridés a permis d'obtenir des données de fréquences de taille sur 392 makaires bleus. Quatre makaires bleus ont été marqués, injectés d'oxytétracycline, et relâchés en octobre 1989, ceci faisant partie d'un effort pour évaluer l'exactitude des méthodes de détermination de l'âge de ces espèces. Le budget de l'ICCAT pour la Jamaïque est examiné et les changements et les besoins pour l'année à venir sont indiqués. Les championnats d'istiophoridés à Puerto Antonio ont fourni 1.000,00 US\$ pour le programme d'istiophoridés de 1990.

INTRODUCTION

All Jamaican fishing operations were severely affected for the months immediately following Hurricane "Gilbert" on September 12, 1989. Consequently, there was little activity in the offshore fishing sector (namely the billfish fishery) on which to report. The annual Montego Bay Yacht Club (MBYC) tournament took place immediately before "Gilbert", and results are indicated later. There was a "Survivors of Gilbert" tournament in Port Antonio (PA) in October, but it was of minimum effort of a low key, however it is also reported in the results. There were no tournaments at all in Ocho Rios (OR) in 1988. The 1989 season has been active; but firstly a brief report on activities in other Caribbean Islands.

CARIBBEAN AREA. This investigator was invited to attend tournaments in Havana, Cuba (May 16-20), Cayman Islands (June 1-30), St. Thomas, U.S.V.I. (August 13-17), Puerto Rico (September 3-9). In Havana, the 39th Ernest Hemingway International Billfish tournament was fished for four days by 45 boats with a total catch of eight blue marlin, seven white marlin, and one sailfish. Single hook rigs only were allowed with a 30 lb test line maximum. This catch is to be regarded as poor by other Caribbean standards. One factor which may have a detrimental effect on fishing effort is the large number of oil slicks in the fishing area adjacent to Havana. Oil originates from Havana Harbour (which is very seriously polluted) and from vessels pumping bilge and washing tanks in Cuban coastal waters.

The Cayman Islands had another productive month in June with 196 blue marlins caught of which 158 were released. Due to the emphasis on release of fish under 89.3 kg (200 lb), no billfish were measured by this investigator during the June, 1989, visit to the Cayman Islands.

In St. Thomas, U.S.V.I. in July, 1989, catches of large blue marlin was continuously reported by recreational anglers on either side of the full moon. Many of the fish tagged and released were in the 223.2 - 402 kg (500-900 lb) category.

The famous U.S.V.I. Open Atlantic Blue Marlin Tournament a.k.a. "The Boy Scouts Tournament" took place during August 13-17, 1989. This year produced record catches with 33 boats catching, tagging and releasing 141 blue marlin, an average of 4.27 blue marlin/boat for four days fishing. An officer from the U.S. Department of Commerce, NMFS was on hand to collect relevant catch information. It was also reported that excellent blue marlin catches were had in Jamaica and Puerto Rico during this phase of the lunar cycle.

San Juan, Puerto Rico saw the 36th International Billfish tournament have catches that were lower than the two preceding years. Hurricane "Gabrielle" passing 350 miles to the east at the time is considered to have affected fishing. Only fish over

89.3 kg (200 lb) were landed and these were measured by an investigator from the U.S. Department of Commerce, NMFS.

Both the U.S.V.I. and Puerto Rico are now recovering from the ravages of Hurricane "Hugo". There was considerable damage to recreational fishing vessels and marinas in these locations.

JAMAICA. As mentioned in the introduction, there was little fishing effort of any consequence following Hurricane "Gilbert". Visits to artisanal fishing beaches and recreational fishing beaches indicated a slow rate of recovery and therefore decreased fishing effort in all sectors of the industry. Commercial buyers of billfish reported very slow business.

In February, Dr. Eric Prince of NMFS visited Jamaica and was introduced to both charterboat captains and artisanal or canoe fishermen in OR. Of the eight charter boats in OR, only five were in operation since the hurricane, each reporting slow business and therefore slow fishing. At that time (February 27) no boat had landed more than four blue marlin for the year.

Billfish forms from ICCAT, tapes and species identification photographs were issued to artisanal fishermen and charter boats in Negril, Lances Bay, Luega, Montego Bay, Whitehouse, Falmouth, OR, Oracabessa, Port Movia, PA and Marchionel (Fig. 1).

Only one blue marlin and one white marlin were caught in the PA Spring Tournament, March 16-18, 1989. However, charter boat operators reported good catches of blue marlin throughout May and into June. These catches were recorded individually on ICCAT sheets. Further catches were reported in August with several large females being taken, up to 250 kg, off OR, and one of 272 kg taken off PA.

Jamaican billfish tournament catches from 1976 to 1989 are listed below in kg. Other catch details were furnished in Harvey (1989) for this period.

Table 1. Blue marlin catches in Jamaican Tournaments 1976-1989.

Year	No. of Tourn.	Boat Days Fished	Boat Hours Fished	Blue Marlin Hooked Per Hour	Blue Marlin Boated	Total Weight (kg)
1976	2	8½	1,040	0.054	19	1,150.4
1977	2	8½	980	0.054	12	599.5
1978	1	3½	423	0.031	5	272.3
1979	1	3½	346	0.043	3	147.0
1980	1	3½	308	0.055	2	114.3
1981	1	3½	462	0.030	6	371.9

Table 1. Blue marlin catches in Jamaican Tournaments 1976-1989 (continued).

Year	No. of Tourn.	Boat Days Fished	Boat Hours Fished	Blue Marlin Hooked Per Hour	Blue Marlin Boated	Total Weight (kg)
1982	2	8½	2,443	0.069	50	3,036.6
1983	2	8½	3,419	0.076	84	5,221.4
1984	4	14½	4,356	0.063	92	5,078.8
1985	4	16½	4,783	0.074	115	5,624.5
1986	4	17	4,446	0.102	185	10,537.9
1987	6	21½	3,353	0.096	108	6,607.1
1988	3	8½	1,292	0.036	47	2,241.1
1989	3	13	3,405	0.033	141	6,626.6

This table excludes a total of ten sailfish, six white marlin, one spearfish caught in tournaments during this period.

Charter boats submitted ICCAT Billfish sampling sheets to this investigator with catch data up to October 1, 1989. It is noted that six boat captains were particularly helpful, with some contributing length-weight data, but all giving weight data for the period January 1-October 1, 1989. These charter boats are regarded as the most successful of the 18 boats operating on the island and they probably account for 75% of the charter boat catch. Table 2 below indicates the catch record from these six boats for 1989.

Table 2. Six Jamaican Charter Boat Blue Marlin Catches During the Period January 1-October 1, 1989.

Boat Name	Location	# Blue Marlin Landed	Mean WT (kg)	Total WT (kg)
No Problem II	Montego Bay	12	51.5	618.30
Richillin	Montego Bay	9	58.5	526.34
Kingfisher II	Ocho Rios	44	61.6	2,708.93
Misty	Ocho Rios	23	56.2	1,293.75
Triple B	Ocho Rios	47	55.3	2,598.66
Sunfisher II	Oracabessa	45	52.7	2,370.98
Totals		180	56.2	10,116.96

In 1988, "No Problem II" landed 19 blue marlin for a total of 1,093.3 kg.

Unfortunately, very little information has been obtained from the artisanal fishing fleet along the island's north coast. Participants at the 1989 MBYC Canoe Fisherman's tournament indicated good catches in May, August and September. As noted in last year SCRS report from Jamaica (Harvey 1989), the Canoe tournament involves only commercial artisanal fishermen. In seven hours trolling, by 31 canoes, four blue marlin and one sailfish were boated in the one day tournament on September 12, 1989. Assuming canoe fishing effort is three times greater than the charter boat effort on any given day, it is possible that the total artisanal catch in the period January 1-October 1, 1989 is in the order of 38,000 kg of blue marlin, assuming 60 canoes currently catch billfish along the north coast, from fishing beaches indicated in Figure 1.

1989 TOURNAMENTS IN JAMAICA

The first held was the PA Spring tournament March 16-18. Twenty boats fished three days, and although fishing was directed at non-billfish species, one blue marlin (52.2 kg) and one white marlin (25.4 kg) were boated from six billfish hookups reported.

There were no spring billfish tournaments in Falmouth or OR due to lack of organization. Good catches were reported at the 29th MBYC tournament. Many sailfish were observed feeding near the drop off. This is unusual since sailfish are rarely caught in Jamaican waters. Two sailfish were caught in the MBYC tournament, and another two caught in the OR tournament. The mean weights of blue marlin boated in 1988 and 1989 in MBYC and OR is considerably less than the mean weight for previous tournaments in the same locations, (see Table 4 and Figure 2). However, a total of 54 blue marlin and 2 sailfish were caught by 17 boats in OR, setting a new national record of 3.29 billfish per boat in 4½ days fishing, and a record of 22 blue marlin caught by 17 boats in one day (8½ hours) for a daily catch record of 129 blue marlin/boat/day. Table 3 below gives the 1989 tournament catch data.

Table 3. Jamaican Tournament Catch Data (Blue Marlin Only) for 1989.

Year	Location	Date	# Anglers	# Boats	# Days	# Hours	# Hookups Reported	Blue Marlin Hooked Per Hour	Blue Marlin Landed Per Hour	Blue Marlin /Boat	# Blue Marlin	% on Lures	Hours/Kg	Mean (Kg)	Total (Kg)
1989	MBYC	Sept. 10-15	61	12	4½	486	46	0.094	0.049	2	24	100	61.2	46.07	1,105.8
1989	Ocho Rios	Sept. 23-30	82	17	4½	532	91	0.139	0.083	3.29	54	100	72.4	46.28	2,544
1989	Port Antonio	Oct. 9-13	268	71	4	2,267	138	0.061	0.029	0.91	63	96.6	141.1	47.23	2,976.8

The canoe fishermen's tournament at OR was not held in 1989. The 26th PA International Marlin tournament was held October 9-13. On October 8, three blue marlin were tagged, injected with oxytetracycline (OTC) and released. In addition, another blue marlin was tagged with OTC and released during the tournament.

Only two blue marlin over 89.3 kg (200 lbs) were taken in the PA tournament with the majority of blue marlin weighing between 40-50 kg. Table 4 and fig. 2 illustrates the changes in total and mean.

Table 4. A Comparison of Mean Blue Marlin Total Weights in Various Tournaments in Jamaica 1961-1989.

Year	Location	No. Blue Marlin	Total Catch (kg)	Mean Weight (kg)
1961	Port Antonio	30	1,699.1	56.64
1976	Port Antonio	14	872.3	62.31
1977	Port Antonio	8	403.1	50.39
1978	Montego Bay Yacht Club	5	272.3	54.46
1979	Montego Bay Yacht Club	3	147.8	49.25
1980	Montego Bay Yacht Club	2	114.3	57.16
1981	Montego Bay Yacht Club	7	371.9	53.12
1982	Montego Bay Yacht Club	21	1,184.4	56.40
1982	Port Antonio	28	1,852.2	66.15
1983	Montego Bay Yacht Club	12	798.6	66.55
1983	Port Antonio	72	4,422.8	61.43
1984	Ocho Rios (Spring)	18	1,287.9	71.55
1984	Montego Bay Yacht Club	7	539.6	77.07
1984	Port Antonio	50	2,609.4	52.19
1984	Ocho Rios (Fall)	17	854.0	50.24
1985	Ocho Rios (Spring)	3	160.7	53.57
1985	Montego Bay Yacht Club	30	1,656.7	55.22
1985	Port Antonio	68	2,971.4	43.70
1985	Ocho Rios (Fall)	14	835.7	59.69
1986	Ocho Rios (Spring)	13	829.9	63.84
1986	Montego Bay Yacht Club	34	2,067.2	60.80
1986	Port Antonio	105	5,777.7	55.02
1986	Ocho Rios (Fall)	33	1,863.4	56.47
1987	Falmouth	9	507.6	56.40
1987	Ocho Rios (Spring)	10	767.9	76.78
1987	Montego Bay Yacht Club	12	876.9	73.06
1987	Ocho Rios (Fall)	35	1,851.6	52.90
1987	Port Antonio (a)	32	2,142.9	66.96
1987	Port Antonio (b)	8	460.7	57.59
1988	Port Antonio (Spring)	2	108.5	54.24
1988	Falmouth	5	275.9	55.18
1988	Montego Bay Yacht Club	26	1,226.4	47.17
1988	Port Antonio (Fall)	21	1,014.7	48.32
1989	Port Antonio (Spring)	1	52.23	52.23
1989	Montego Bay Yacht Club	24	1,105.8	46.07
1989	Ocho Rios	54	2,544.5	47.12
1989	Port Antonio (Fall)	63	2,976.8	47.25

There appears to be a substantial decrease in mean weight of blue marlin landed in tournaments during the last two years (Fig. 2), mean weights of blue marlin for these two years were both below 50 kg. Prior to 1988, the mean weight of blue marlin only fell below the 50 kg mark twice -- in 1979 (only three blue marlin sampled), and 1985 (68 blue marlin in Port Aransas tournament).

The total catches of blue marlin by the tournaments and charter boats from January 1-October 13, 1989 are 6,626.6 kg + 10,116.96 kg respectively, for a total of 16,743.56 kg. As indicated previously, the artisanal catch may be as high as 38,000 kg for the same period.

A total of 392 blue marlin were sampled for weight and body length variables in the period October 1988-October 1989.

1988/1989 Expenditure

Initial expenses included purchase of 5 M measuring tapes and logbooks for 12 charter fishing boats and for 16 artisanal fishermen at various locations indicated in Figure 1. Monthly expenses include traveling (and occasionally accommodations) and paid assistants including charter boat captains and artisanal fishermen for information.

The \$1,500 (U.S.) grant from ICCAT was exchanged at the official bank rate of \$1 (U.S.) - \$ 550 (J) in October 1988, for a total \$8,250 (J).

Expenses are itemized below:

1. Hardware: tapes, logbooks, knives, etc.	\$2,758.00 (J)
2. Gasoline	\$3,015.00 (J)
3. Vehicle maintenance	\$ 440.00 (J)
4. Information and assistance and telephone	\$1,400.00 (J)
	Sub-total \$7,613.00 (J)
	Balance \$ 637.00 (J)

It is expected that this balance will be spent at the PA tournament in terms of assistants and gasoline.

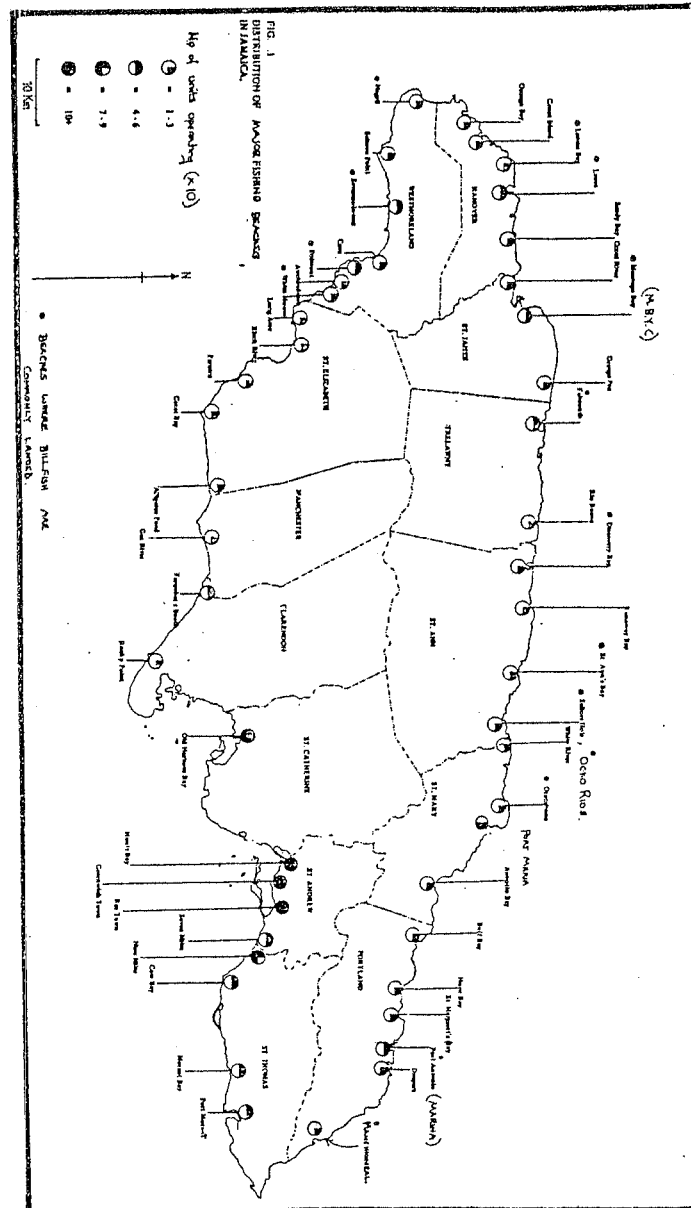
This investigator wishes to note that he has unsuccessfully attempted to involve a U.W.I. Department of Zoology post graduate student in the ICCAT Billfish port sampling program. However, further attempts will be made in 1989/90 to involve a student in fisheries biology.

Finally, proceeds donated from anglers participating in the 1989 PA International Marlin tournament to the ICCAT Billfish port sampling program have amounted to \$6,000.00 (J) or \$1,000.00

(U.S.) at the current exchange rate of \$1 (U.S.) to \$6 (J).
 These funds will be transferred to Madrid on or before January 1,
 1990.

Literature Cited

Harvey, G. C. McN. 1989. An historical review of recreational
 and artisanal fisheries for billfish in Jamaica 1976-1988.
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BLUE MARLIN TOURNAMENT CATCH

Jamaica (1976 to 1989)

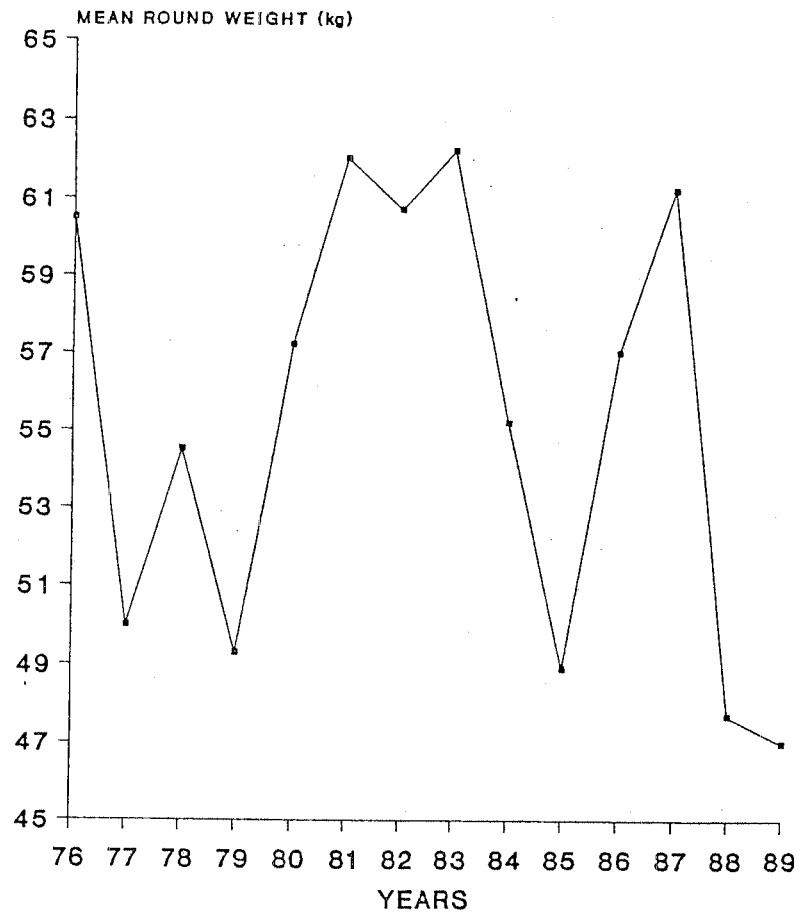


Figure 2. Mean round weight (kg) of blue marlin landed in Jamaican billfish tournaments, 1976-1989.