

CATCH STATISTICS AND SAMPLE LENGTH COMPOSITION IN
JAPANESE ATLANTIC TUNA PURSE SEINE FISHERY,
1967-1969

by

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SUMMARY

This report provides a summary of catch, effort and sample length composition data of the Japanese tuna purse seine fleet in the Atlantic Ocean for the three years, 1967-1969. The basic data prepared in ICCAT forms for Task 2 and biological statistics are included in Data Record, Vol. 2.

RESUME

Ce rapport fournit un résumé des données de capture, d'effort et de composition par taille de l'échantillon de la flotte japonaise de senneurs dans l'Atlantique de 1967 à 1969. Les données de base relevées sur les formulaires ICCAT de la Tâche 2, ainsi que les statistiques biologiques, figurent au Vol. 2 du Recueil de Données.

RESUMEN

Este informe ofrece un resumen de los datos de capturas, esfuerzo y muestreo de composición de tallas de la flota japonesa de cerco en el Océano Atlántico durante el trienio 1967-1969. Se ha incluido en el Volumen Nº 2 de la Colección de Datos Estadísticos los datos básicos que han sido preparados en los impresos de ICCAT para la Tarea 2 y estadísticas biológicas.

Since 1964 the Japanese tuna purse seine fleet has operated in the eastern Atlantic Ocean, and the fishermen submitted logbooks and length measurements to the Fishery Agency. These data up to 1969 were already reviewed by Honma *et al.* (1969) and Hayasi (1972a, b), and summarized catch records were included in the ICCAT Statistical Bulletins.

Honma and Suzuki (1972) reported catch statistics by 1° square and sample length composition by 5 x 10° quadrangle during 1970, and number of boats operated up to 1970. Here are presented catch statistics and sample length composition for the preceding three years.

1. Catch statistics

Logbooks are prepared for each cruise, taking the following remarks into account.

- a. Days at sea and of operations are given for each cruise, but not for each 1°-square.
- b. Position and catch are given for each haul.
- c. Catch is given in 100 kg of live weight for 8 species, two of which are classified into two size groups, inclusive of:
 - (1) bluefin tuna, large --- 10 kg or heavier in body weight,
 - (2) bluefin tuna, small --- lighter than 10 kg in body weight,
 - (3) bigeye tuna,
 - (4) yellowfin tuna, large --- 20 kg or heavier in body weight,
 - (5) yellowfin tuna, small --- lighter than 20 kg in body weight,
 - (6) albacore,
 - (7) skipjack,
 - (8) bonito,
 - (9) frigate mackerels, and,
 - (10) others and unidentified.

Among them, bluefin tuna and albacore, mostly taken in the waters around Japan are very rare in the Atlantic operations.

These statistics were compiled for each of single- and double-boat seiners. Table 1 to 3 give number of boats and days of operations, and catch by species in the whole Atlantic Ocean, for each month. Appendix Table 1 shows number of hauls and catch by 1°-square and by month. Total catch by Japanese purse seine fishery increased about 16,000 tons in 1968, but decreased about 7,000 tons in 1969. The wide fluctuation during the three years is attributed to success or failure of skipjack catch (Fig. 1).

In the FIS Area 1 yellowfin tuna and skipjack were mainly taken in June to October (Fig. 2). Two peaks of catch appeared in the FIS Area 2: one extends from April to June in all the three years, and the other during November and December in 1967 and 1968, and between August and December in 1969 (Fig. 3). The Japanese purse seiners operated in the FIS Area 3 in September and October 1968, but caught only 156 tons of tunas. The fishing activity has risen in the southeastern part of the Gulf in the northern summer, and in the northwestern part in the other seasons of year.

2. Sample length composition

Appendix Table 2 presents size composition of samples taken by Japanese purse seiners operated in the Atlantic Ocean in 1967 to 1969. The data are compiled by quadrangle of Lat. 5° and Long. 10° and by month. A quadrangle is expressed by the smallest figures of Latitude and Longitude: e. g. 5N and 10W denote a quadrangle extending between Lat. 5° N and 10° N, and Long. 10° W and 20° W.

References

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- International Commission for the Conservation of Atlantic Tunas 1971. "Statistical Bulletin" 1.
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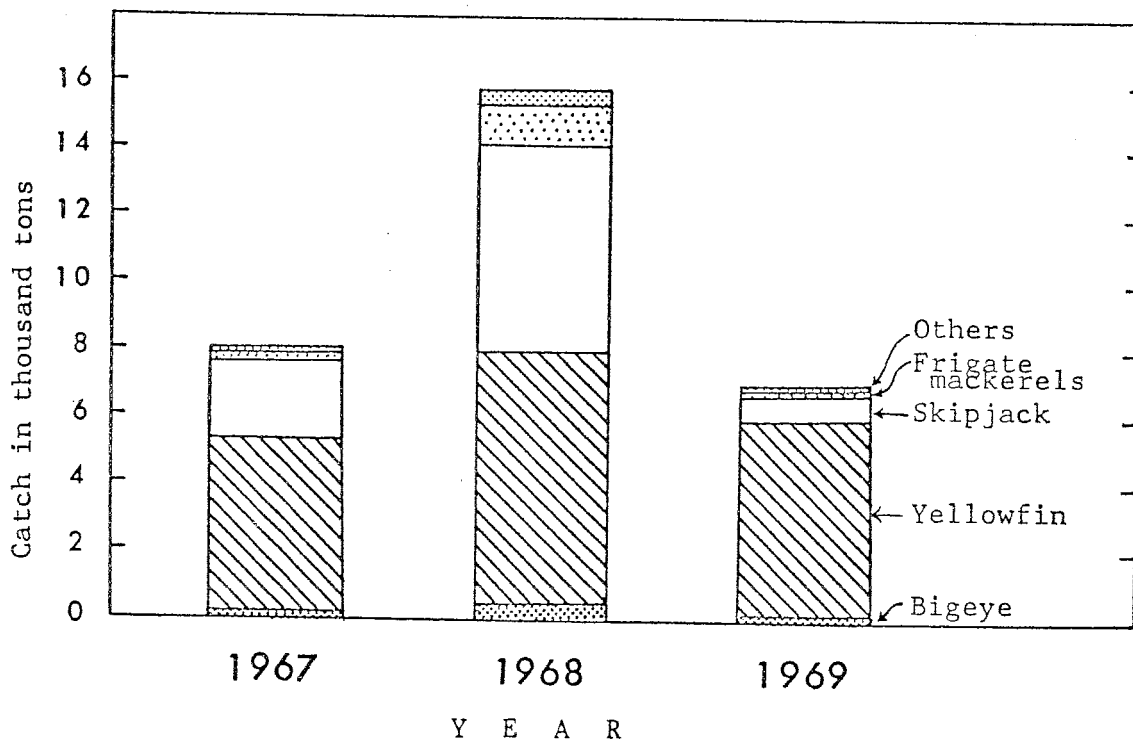


Fig 1. Amount of tunas caught by Japanese Atlantic purse seine fishery 1967-1969.

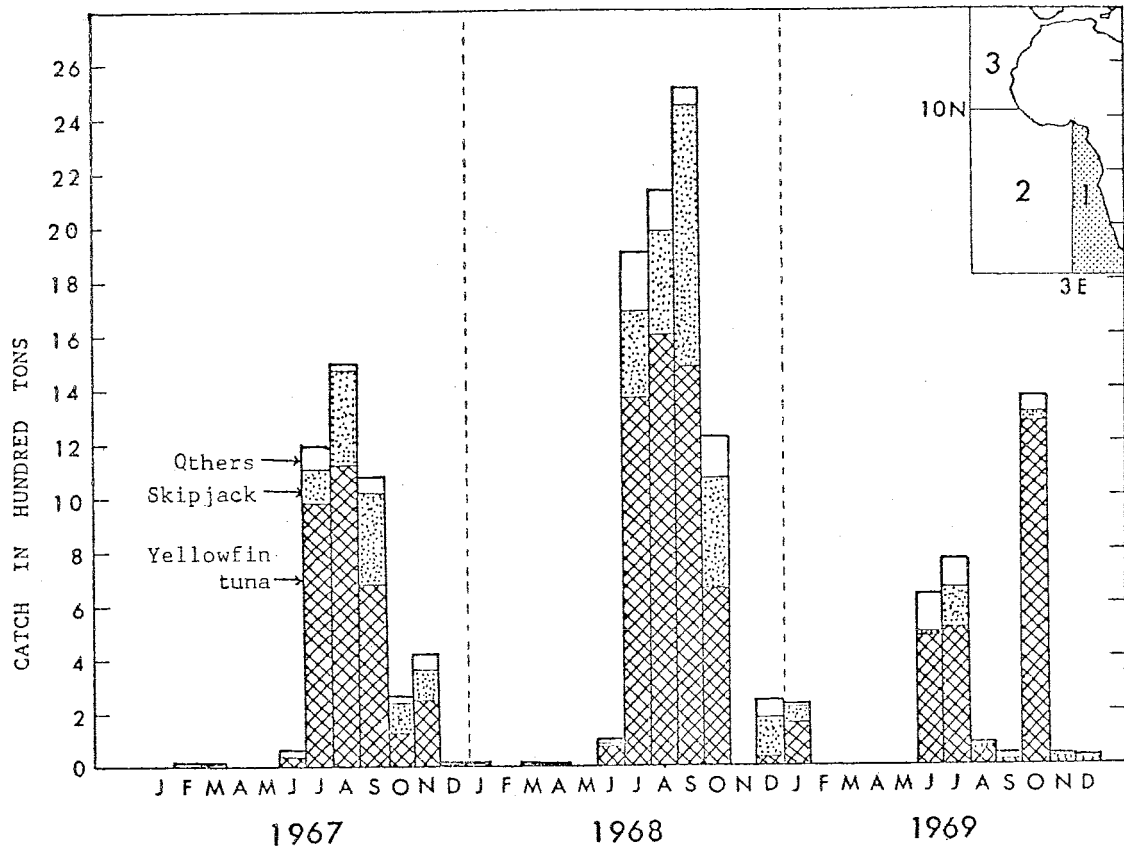


Fig. 2. Monthly catch of tunas by Japanese purse seiners in FIS Area 1.

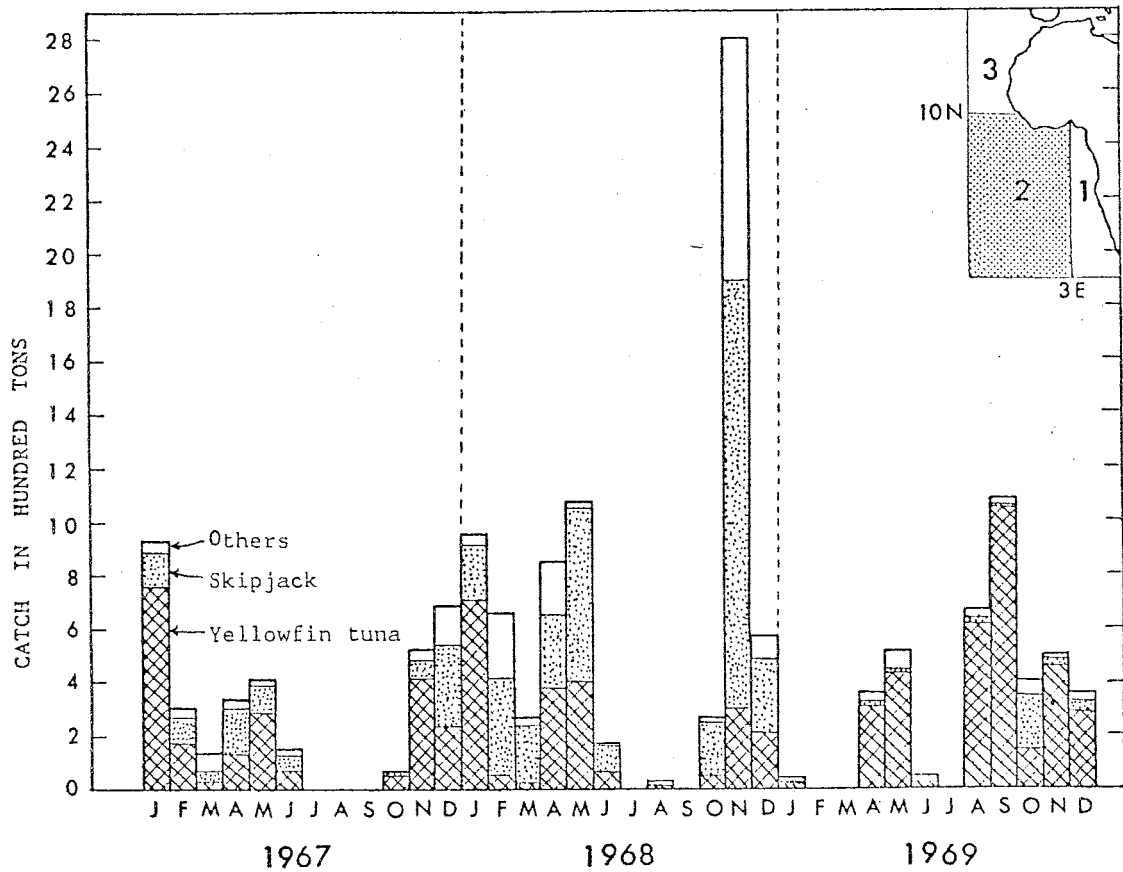


Fig. 3 Monthly catch of tunas by Japanese purse seiners in FIS Area 2.

Table 1. Number of boats and days of operation, and catch in the Japanese Atlantic tuna purse seine fishery, 1967.

Type of boats	Month	Number of boats	Number of days of operation	Number of hauls	Catch in tons							
					Total	Bigeye tuna	Yellowfin tuna			Skipjack	Frigate mackerels	Others & unidentified
							Subtotal	Small	Large			
Grandtotal		4	590	856	8,005.1	82.0	5,244.2	508.2	4,736.0	2,171.1	442.7	65.1
Double-boat	Total	4	590	856	8,005.1	82.0	5,244.2	508.2	4,736.0	2,171.1	442.7	65.1
	Jan.	3	59	89	923.1	2.9	745.2	62.9	682.3	145.4	27.9	1.7
	Feb.	3	31	39	305.9	-	167.1	36.2	130.9	106.5	30.6	1.7
	Mar.	3	17	22	136.0	0.1	28.7	13.9	14.8	56.8	50.1	0.3
	Apr.	2	58	84	331.8	0.2	135.1	37.2	97.9	168.1	27.3	1.1
	May	3	55	82	405.2	0.1	287.7	31.9	255.8	114.3	0.8	2.3
	June	3	24	35	214.6	8.5	92.8	4.4	88.4	88.5	24.3	0.5
	July	2	71	71	1,182.8	17.4	979.8	51.4	928.4	122.0	59.5	4.1
	Aug.	3	52	109	1,495.0	16.0	1,120.4	104.7	1,015.7	350.9	5.2	2.5
	Sept.	3	68	101	1,076.0	2.8	673.2	44.6	628.6	343.8	52.1	4.1
	Oct.	3	31	40	325.7	12.8	116.6	23.9	92.7	187.7	6.8	1.8
	Nov.	3	58	92	926.1	21.1	673.8	42.7	631.1	172.7	55.2	3.3
	Dec.	4	66	92	682.9	0.1	223.8	54.4	169.4	314.4	102.9	41.7

Table 2. Number of boats and days of operation, and catch in the Japanese Atlantic tuna purse seine fishery, 1968.

Type of boats	Month	Number of boats	Number of days of operation	Number of hauls	Catch in tons							
					Total	Bigeye tuna	Yellowfin tuna			Skipjack	Frigate mackerels	Others & unidentified
							Subtotal	Small	Large			
Grandtotal		7	953	1,292	15,860.5	412.7	7,462.7	2,666.4	4,796.3	6,255.5	1,253.5	476.1
Single-boat	Total	3	229	319	2,303.8	13.0	1,033.7	558.5	475.2	1,044.3	20.3	192.5
	July	2	15	16	194.4	-	179.6	139.7	39.9	14.8	-	-
	Aug.	3	42	61	554.6	9.9	403.5	134.1	269.4	89.5	0.2	51.5
	Sept.	3	33	45	352.0	3.1	144.6	105.0	39.6	200.7	-	3.6
	Oct.	3	36	49	437.4	-	125.2	50.6	74.6	284.2	6.0	22.0
	Nov.	3	50	68	466.6	-	86.0	70.6	15.4	323.4	14.1	43.1
	Dec.	3	53	80	298.8	-	94.8	58.5	36.3	151.7	-	72.3
Double-boat	Total	4	724	973	13,556.7	399.7	6,429.0	2,107.9	4,321.1	5,211.2	1,233.2	283.6
	Jan.	4	74	107	951.6	4.2	725.0	25.7	699.3	189.1	31.6	1.7
	Feb.	2	50	68	653.2	14.0	46.7	37.4	9.3	369.7	201.6	21.2
	Mar.	4	16	23	277.6	3.2	27.6	25.1	2.5	218.2	26.1	2.5
	Apr.	4	62	88	841.2	15.8	382.1	114.2	267.9	272.0	141.5	29.8
	May	4	89	142	1,078.2	0.3	410.0	155.1	254.9	644.4	17.5	5.9
	June	4	21	24	264.1	1.8	140.2	10.9	129.3	122.1	-	-
	July	4	51	54	1,707.8	211.4	1,194.6	482.1	712.5	292.5	4.5	4.8
	Aug.	4	68	94	1,612.0	62.4	1,230.4	262.9	967.5	293.8	16.8	8.6
	Sept.	4	75	82	2,279.4	44.6	1,347.1	504.3	842.8	869.3	12.0	6.4
	Oct.	4	57	77	1,068.3	19.2	557.4	257.0	300.4	382.5	94.1	15.1
	Nov.	4	93	117	2,327.2	22.8	227.3	201.6	25.7	1,259.2	637.5	180.4
	Dec.	4	68	97	496.2	-	140.6	31.6	109.0	298.4	50.0	7.2

Table 3. Number of boats and days of operation, and catch in the Japanese Atlantic tuna purse seine fishery, 1969.

Type of boats	Month	Number of boats	Number of days of operation	Number of hauls	Catch in tons							
					Total	Bigeye tuna	Yellowfin tuna			Skipjack	Frigate mackerels	Others & unidentified
							Subtotal	Small	Large			
Grandtotal		6	613	827	6,988.9	161.3	5,805.2	650.0	5,155.2	678.8	177.3	166.3
Single-boat	Total	2	141	237	1,442.3	22.6	1,121.8	256.7	865.1	255.1	37.3	5.5
	Jan.	2	14	23	41.0	-	31.5	18.4	13.1	4.5	-	5.0
	June	1	14	28	179.2	1.6	152.6	34.7	117.9	25.0	-	-
	July	1	7	11	125.4	19.5	46.8	5.7	41.1	58.7	-	0.4
	Aug.	2	25	42	255.1	0.2	206.0	65.0	141.0	48.9	-	-
	Sept.	2	26	45	152.5	1.3	138.5	29.7	108.8	12.7	-	-
	Oct.	2	34	55	383.1	-	249.3	41.2	208.1	96.4	37.3	0.1
	Nov.	2	15	24	221.3	-	215.4	13.8	201.6	5.9	-	-
Dec.	1	6	9	84.7	-	81.7	48.2	33.5	3.0	-	-	
Double-boat	Total	4	472	590	5,546.6	138.7	4,683.4	393.3	4,290.1	423.7	140.0	160.8
	Jan.	4	36	47	191.9	0.3	126.8	70.3	56.5	61.5	1.8	1.5
	Apr.	3	57	70	356.7	0.2	291.0	153.6	137.4	33.1	17.3	15.1
	May	3	44	63	510.2	-	445.3	38.9	406.4	-	23.8	41.1
	June	3	24	26	483.9	61.2	355.9	18.0	337.9	3.9	0.1	62.8
	July	3	43	52	628.8	31.5	462.0	11.1	450.9	91.5	40.3	3.5
	Aug.	3	27	37	481.7	8.0	432.4	3.4	429.0	27.0	-	14.3
	Sept.	3	54	70	922.3	5.1	914.2	1.0	913.2	0.3	-	2.7
	Oct.	3	46	64	1,376.3	32.2	1,147.8	67.7	1,080.1	158.6	30.2	7.5
	Nov.	3	57	67	290.2	0.2	268.0	13.3	254.7	12.5	7.5	2.0
	Dec.	3	84	94	304.6	-	240.0	16.0	224.0	35.3	19.0	10.0