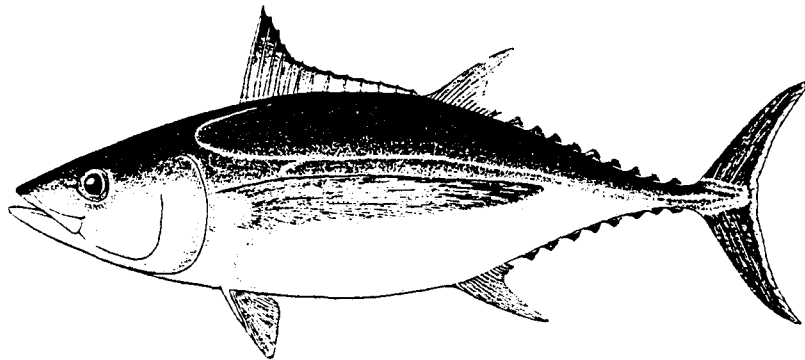




Current status of the SPAR database

**Oceanic Fisheries Programme
South Pacific Commission**



**Sixth South Pacific Albacore Research Workshop
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INTRODUCTION

At the Second South Pacific Albacore Research (SPAR 2) Workshop, held in Suva from 14 to 17 June 1989, the participants agreed to the offer made by SPC to act as a clearinghouse for the receipt and distribution of albacore data.

Guidelines for the submission of data were proposed at SPAR 3, held in Noumea, New Caledonia, from 9 to 12 October 1990. These guidelines were further reviewed and amended at SPAR 5, held in Papeete, French Polynesia, from March 29 to April 1 1993. The current guidelines for data submission include :

- (1) *Provisional estimates of the total annual catch for longline and surface fisheries of the immediate past calendar year and season, respectively, should be made available on September 1st.*
- (2) *Catch and effort data for longline fisheries aggregated by 5° square and month should be made available on September 1st, 12 months after the end of the calendar year. Catch and effort data for surface fisheries aggregated by 5° square and month should be made available on September 1st, 18 months after the end of the season.*
- (3) *Length-frequency data stratified by 5° latitude and 10° longitude by month should be made available at the same time as aggregated catch and effort data.*

Catch and effort data covering longliners from Australia, Cook Islands, Fiji, New Caledonia, New Zealand and Tonga are held in the SPC Regional Tuna Fisheries Database. These daily catch and effort data in the Regional Tuna Fisheries Database were aggregated by 5° square and month, and transferred to the SPAR Database. Daily catch and effort data for New Zealand and Tonga longliners have not been available in recent years; the last data received for New Zealand longliners covers 1991 and for the Tongan longline fleet covering 1993.

A request for catch and effort data that are not held in the SPC Regional Tuna Fisheries Database was made in the latest version of the SPAR Newsletter (SPAR News, Issue 2). Longline catch and effort data up to and including 1993 were provided by Japan, Korea and Taiwan. Data from Australia (covering domestic trollers for the seasons 1992/93 to 1994/95) and the National Marine Fisheries Service (NMFS) (covering US trollers for the seasons 1992/93 to 1994/95) were received.

The most significant contribution of monthly length-frequency data for the reporting period were received from NMFS, covering port sampling of Japanese, Korean and Taiwanese vessels in American Samoa since 1962; these data had previously been provided for the SPAR database, but stratified at annual level only. NMFS also provided length data from US troll vessels for the seasons 1992/93 to 1994/95. Additional length frequency data were collected by port samplers in Fiji and New Caledonia, which monitor the catch composition of albacore from longline vessels of various origin.

Table 1. Availability of data for the SPAR Catch and Effort Database

SOURCE	VESSEL NATIONALITY	GEAR TYPE	TIME PERIOD	STATUS	COMMENTS
AUSTRALIA	AUSTRALIA	L	1985-1991	√	Transferred from the Regional Tuna Fisheries Database.
AUSTRALIA	AUSTRALIA	T	1991/92	√	Provided by Bureau of Resource Sciences for Albacore Troll survey.
AUSTRALIA	AUSTRALIA	T	1991/92-1994/95	√	Transferred from the Regional Tuna Fisheries Database; includes trolling on multi-gear vessels.
COOK ISLANDS	COOK ISLANDS	L	1994	√	Transferred from the Regional Tuna Fisheries Database.
FIJI	FIJI	L	1989-1994	√	Transferred from the Regional Tuna Fisheries Database.
FRENCH POLYNESIA	FRENCH POLYNESIA	L	1992,1994	√	Provided by EVAAM; (1993 to be made available shortly).
FRENCH POLYNESIA	FRENCH POLYNESIA	T	1991/92	√	Provided by EVAAM.
JAPAN	JAPAN	G	1983/84-1987/88	x	Requested of NRIFSF.
JAPAN	JAPAN	G	1988/89-1989/90	√	Provided to SPC during SPAR 3, Oct/90.
JAPAN	JAPAN	L	1952-1961	x	Requested of NRIFSF.
JAPAN	JAPAN	L	1962-1993	√	Published by the Fisheries Agency of Japan (1962-1980) Provided to SPC (1981-1993).
KOREA	KOREA	L	1958-1974	x	Requested of NFRDA.
KOREA	KOREA	L	1975-1993	√	Published by the National Fisheries Research and Development Agency.
NEW CALEDONIA	NEW CALEDONIA	L	1983-1994	√	Transferred from the Regional Tuna Fisheries Database.
NEW ZEALAND	NEW ZEALAND	L	1979-80,1989-91	√	Transferred from the Regional Tuna Fisheries Database.
NEW ZEALAND	NEW ZEALAND	L	1992-94	x	Requested of MAF.
NEW ZEALAND	NEW ZEALAND	T	1968/69-1981/82	x	Catch data only for 1968/69-1981/82. Requested of MAF.
NEW ZEALAND	NEW ZEALAND	T	1982/83-1990/91	√	Provided by MAF.
NEW ZEALAND	NEW ZEALAND	T	1991/92-1994/95	x	Requested of MAF.
SPC	NEW ZEALAND	T	1991/92	√	Catch and effort data collected during SPC observer and port sampling activities.
TAIWAN	TAIWAN	G	1987/88	x	Data are unavailable at Tuna Research Center, Taiwan National University (NTU).
TAIWAN	TAIWAN	G	1988/89	√	Provided by the Tuna Research Center, NTU.
TAIWAN	TAIWAN	G	1989/90-1990/91	x	Requested of the Tuna Research Center, NTU.
TAIWAN	TAIWAN	L	1954-1966	x	Data are unavailable at Tuna Research Center, NTU.
TAIWAN	TAIWAN	L	1967-1993	√	Data provided by the Tuna Research Center, NTU.
TONGA	TONGA	L	1982-1993	√	Transferred from the Regional Tuna Fisheries Database.
TONGA	TONGA	L	1994	x	Requested of Tonga Fisheries Division.
UNITED STATES	UNITED STATES	T	1986/87-1994/95	√	Data provided by NMFS.

Key: G, driftnet; L, longline; T, troll; √ available; x unavailable

Table 2. Availability of data for the SPAR Size Frequency Database

SOURCE	VESSEL NATIONALITY	GEAR TYPE	TIME PERIOD	STATUS	COMMENTS
AUSTRALIA	AUSTRALIA	T	1991/92	√	Test fishing sponsored by BRS.
AUSTRALIA	JAPAN	L	1979-1991	√	Australian Fishing Zone (AFZ) observer programme sampling.
AUSTRALIA	JAPAN	L	1992-1994	x	Australian Fishing Zone (AFZ) observer programme sampling; Requested of BRS.
FIJI	FIJI	L	1991-1994	√	Port sampling in Suva.
FIJI	KOREA	L	1991-1993	√	Port sampling in Levuka.
FIJI	TAIWAN	L	1989-1994	√	Port sampling in Levuka.
FIJI	TONGA	L	1990	√	Port sampling in Levuka.
FIJI	NEW ZEALAND	T	1989/90	√	Port sampling in Levuka.
FIJI	UNITED STATES	L	1994	√	Port sampling in Suva.
FIJI	UNITED STATES	T	1989/90	√	Port sampling in Levuka.
FRENCH POLYNESIA	UNITED STATES	T	1986/87-1991/92	√	Port sampling in Papeete. Weights available. Number of fish injured available.
JAPAN	JAPAN	G	1988/89-1989/90	√	Provided by NRIFSF.
JAPAN	JAPAN	L	1954-1961	x	Requested of the Fisheries Agency of Japan.
JAPAN	JAPAN	L	1962-1980	√	Published by the Fisheries Agency of Japan.
JAPAN	JAPAN	L	1981-1985	x	Requested of NRIFSF.
JAPAN	JAPAN	L	1986-1988	√	Provided by NRIFSF.
JAPAN	JAPAN	L	1989-1994	x	Requested of NRIFSF.
NEW CALEDONIA	NEW CALEDONIA	L	1993-1994	√	Port sampling in NoumŌa.
NEW ZEALAND	NEW ZEALAND	T	1972/73-1985/86	x	Requested of MAF.
NEW ZEALAND	NEW ZEALAND	T	1986/87-1991/92	√	MAF observer and port sampling data.
NEW ZEALAND	NEW ZEALAND	T	1992/93-1994/95	x	Requested of MAF.
SPC	FIJI	T	1990/91	√	Observers aboard chartered vessels.
SPC	JAPAN	G	1988/89	√	Port sampling in NoumŌa by SPC staff.
SPC	JAPAN	G	1989/90	√	Sampled by SPC observers on JAMARC vessel.
SPC	NEW CALEDONIA	L	1990-1992	√	Port sampling in NoumŌa by SPC staff.
SPC	NEW ZEALAND	T	1988/89-1991/92	√	Sampled by SPC observers.
SPC	COOK ISLANDS	T	1991/92	√	Sampled by SPC observers.
SPC	UNITED STATES	T	1988/89-1991/92	√	Sampled by SPC observers.
UNITED STATES	JAPAN	L	1962-1972, 1987	√	Pago-based vessels. Provided by NMFS.
UNITED STATES	JAPAN	L	1962-1972, 1987	√	Pago-based vessels. Provided by NMFS.
UNITED STATES	KOREA	L	1962-1992	√	Pago-based vessels. Provided by NMFS.
UNITED STATES	TAIWAN	L	1964-1994	√	Pago-based vessels. Provided by NMFS.
UNITED STATES	UNITED STATES	T	1986/87-1994/95	√	Provided by NMFS.

Key: G, driftnet; L, longline; T, troll; √ available; x unavailable

Table 3. Catch and Effort data held in the SPAR database

Gear	Year	Flag	Source	Time, Area ¹	Catch/ Effort ²	Number of Records
DRIFTNET	1988/1989	JAPAN	JAPAN	M, 5	B	37
		TAIWAN	TAIWAN	M, 5	A	86
	1989/1990	JAPAN	JAPAN	M, 5	B	20
LONGLINE	1962	JAPAN	JAPAN	M, 5	B	1024
	1963	JAPAN	JAPAN	M, 5	B	1390
	1964	JAPAN	JAPAN	M, 5	B	1253
	1965	JAPAN	JAPAN	M, 5	B	1143
	1966	JAPAN	JAPAN	M, 5	B	1323
	1967	JAPAN	JAPAN	M, 5	B	1234
		TAIWAN	TAIWAN	M, 5	A	112
	1968	JAPAN	JAPAN	M, 5	B	1135
		TAIWAN	TAIWAN	M, 5	A	360
	1969	JAPAN	JAPAN	M, 5	B	1064
		TAIWAN	TAIWAN	M, 5	A	176
	1970	JAPAN	JAPAN	M, 5	B	1126
		TAIWAN	TAIWAN	M, 5	A	482
	1971	JAPAN	JAPAN	M, 5	B	894
		TAIWAN	TAIWAN	M, 5	A	519
	1972	JAPAN	JAPAN	M, 5	B	910
		TAIWAN	TAIWAN	M, 5	A	524
	1973	JAPAN	JAPAN	M, 5	B	836
		TAIWAN	TAIWAN	M, 5	A	468
	1974	JAPAN	JAPAN	M, 5	B	886
		TAIWAN	TAIWAN	M, 5	A	364
	1975	JAPAN	JAPAN	M, 5	B	737
		KOREA	KOREA	M, 5	B	166
		TAIWAN	TAIWAN	M, 5	A	688
	1976	JAPAN	JAPAN	M, 5	B	913
		KOREA	KOREA	M, 5	B	398
		TAIWAN	TAIWAN	M, 5	A	259
1977	JAPAN	JAPAN	M, 5	B	861	
	KOREA	KOREA	M, 5	B	668	
	TAIWAN	TAIWAN	M, 5	A	420	
1978	JAPAN	JAPAN	M, 5	B	901	
	KOREA	KOREA	M, 5	B	564	
	TAIWAN	TAIWAN	M, 5	A	489	
1979	JAPAN	JAPAN	M, 5	B	842	
	NEW ZEALAND	NEW ZEALAND	M, 5	A	2	
	KOREA	KOREA	M, 5	B	622	
	TAIWAN	TAIWAN	M, 5	A	510	
1980	JAPAN	JAPAN	M, 5	B	942	
	NEW ZEALAND	NEW ZEALAND	M, 5	A	12	
	KOREA	KOREA	M, 5	B	682	
	TAIWAN	TAIWAN	M, 5	A	609	
1981	JAPAN	JAPAN	M, 5	B	974	
	KOREA	KOREA	M, 5	B	839	
	TAIWAN	TAIWAN	M, 5	A	627	
1982	JAPAN	JAPAN	M, 5	B	975	
	KOREA	KOREA	M, 5	B	662	
	TAIWAN	TAIWAN	M, 5	A	433	
	TONGA	TONGA	M, 5	A	15	
1983	JAPAN	JAPAN	M, 5	B	911	
	NEW CALEDONIA	NEW CALEDONIA	M, 5	A	6	
	KOREA	KOREA	M, 5	B	545	
	TAIWAN	TAIWAN	M, 5	A	309	
	TONGA	TONGA	M, 5	A	10	
1984	JAPAN	JAPAN	M, 5	B	944	
	NEW CALEDONIA	NEW CALEDONIA	M, 5	A	16	
	KOREA	KOREA	M, 5	B	510	
	TAIWAN	TAIWAN	M, 5	A	339	
	TONGA	TONGA	M, 5	A	11	

Table 3. Catch and Effort data held in the SPAR database (continued)

Gear	Year	Flag	Source	Time/ Area ¹	Catch/ Effort ²	Number of Records
LONGLINE	1985	JAPAN	JAPAN	M, 5	B	858
		NEW CALEDONIA	NEW CALEDONIA	M, 5	A	38
		KOREA	KOREA	M, 5	B	532
		TAIWAN	TAIWAN	M, 5	A	234
		TONGA	TONGA	M, 5	A	9
	1986	AUSTRALIA	AUSTRALIA	M, 5	A	1
		JAPAN	JAPAN	M, 5	B	889
		NEW CALEDONIA	NEW CALEDONIA	M, 5	A	25
		KOREA	KOREA	M, 5	B	492
		TAIWAN	TAIWAN	M, 5	A	183
	1987	TONGA	TONGA	M, 5	A	17
		AUSTRALIA	AUSTRALIA	M, 5	A	39
		JAPAN	JAPAN	M, 5	B	830
		NEW CALEDONIA	NEW CALEDONIA	M, 5	A	48
		KOREA	KOREA	M, 5	B	472
	1988	TAIWAN	TAIWAN	M, 5	A	258
		TONGA	TONGA	M, 5	A	29
		AUSTRALIA	AUSTRALIA	M, 5	A	52
		JAPAN	JAPAN	M, 5	B	814
		NEW CALEDONIA	NEW CALEDONIA	M, 5	A	25
1989	KOREA	KOREA	Y, 5	B	93	
	TAIWAN	TAIWAN	M, 5	A	229	
	TONGA	TONGA	M, 5	A	22	
	AUSTRALIA	AUSTRALIA	M, 5	A	60	
	FIJI	FIJI	M, 5	A	6	
1990	JAPAN	JAPAN	M, 5	B	790	
	NEW CALEDONIA	NEW CALEDONIA	M, 5	A	49	
	NEW ZEALAND	NEW ZEALAND	M, 5	A	17	
	KOREA	KOREA	Y, 5	B	115	
	TAIWAN	TAIWAN	M, 5	A	196	
1991	TONGA	TONGA	M, 5	A	30	
	AUSTRALIA	AUSTRALIA	M, 5	A	66	
	FIJI	FIJI	M, 5	A	23	
	JAPAN	JAPAN	M, 5	B	745	
	NEW CALEDONIA	NEW CALEDONIA	M, 5	A	49	
1992	KOREA	KOREA	Y, 5	B	81	
	TAIWAN	TAIWAN	M, 5	A	104	
	TONGA	TONGA	M, 5	A	27	
	AUSTRALIA	AUSTRALIA	M, 5	A	84	
	FIJI	FIJI	M, 5	A	33	
1993	JAPAN	JAPAN	M, 5	B	751	
	NEW CALEDONIA	NEW CALEDONIA	M, 5	A	50	
	KOREA	KOREA	Y, 5	B	78	
	TAIWAN	TAIWAN	M, 5	A	171	
	TONGA	TONGA	M, 5	A	27	
1994	AUSTRALIA	AUSTRALIA	M, 5	A	95	
	FIJI	FIJI	M, 5	A	40	
	FRENCH POLYNESIA	FRENCH POLYNESIA	M, 5	A	58	
	JAPAN	JAPAN	M, 5	B	749	
	NEW CALEDONIA	NEW CALEDONIA	M, 5	A	41	
1995	KOREA	KOREA	Y, 5	B	79	
	TAIWAN	TAIWAN	M, 5	A	165	
	TONGA	TONGA	M, 5	A	31	
	AUSTRALIA	AUSTRALIA	M, 5	A	81	
	FIJI	FIJI	M, 5	A	34	
1996	JAPAN	JAPAN	M, 5	B	778	
	NEW CALEDONIA	NEW CALEDONIA	M, 5	A	48	
	KOREA	KOREA	Y, 5	B	81	
	TAIWAN	TAIWAN	M, 5	A	304	
	TONGA	TONGA	M, 5	A	8	
1997	AUSTRALIA	AUSTRALIA	M, 5	A	89	
	COOK ISLANDS	COOK ISLANDS	M, 5	A	15	
	FIJI	FIJI	M, 5	A	40	
	FRENCH POLYNESIA	FRENCH POLYNESIA	M, 5	A	88	
	NEW CALEDONIA	NEW CALEDONIA	M, 5	A	29	
1998	AUSTRALIA	AUSTRALIA	M, 5	A	107	
	COOK ISLANDS	COOK ISLANDS	M, 5	A	10	
	FIJI	FIJI	M, 5	A	14	
	FRENCH POLYNESIA	FRENCH POLYNESIA	M, 5	A	26	
	NEW CALEDONIA	NEW CALEDONIA	M, 5	A	10	

Table 3. Catch and Effort data held in the SPAR database (continued)

Gear	Year	Flag	Source	Time, Area ¹	Catch/ Effort ²	Number of Records
TROLL	1981/1982	NEW ZEALAND	NEW ZEALAND	M, 5	C	2
	1982/1983	NEW ZEALAND	NEW ZEALAND	M, 5	C	21
	1983/1984	NEW ZEALAND	NEW ZEALAND	M, 5	C	33
	1984/1985	NEW ZEALAND	NEW ZEALAND	M, 5	C	30
	1985/1986	NEW ZEALAND	NEW ZEALAND	M, 5	C	32
	1986/1987	NEW ZEALAND UNITED STATES	NEW ZEALAND UNITED STATES	M, 5 M, 5	C A	33 20
	1987/1988	NEW ZEALAND UNITED STATES	NEW ZEALAND UNITED STATES	M, 5 M, 5	C A	27 43
	1988/1989	AUSTRALIA NEW ZEALAND UNITED STATES	AUSTRALIA NEW ZEALAND UNITED STATES	M, 5 M, 5 M, 5	A C A	1 30 48
	1989/1990	NEW ZEALAND UNITED STATES	NEW ZEALAND UNITED STATES	M, 5 M, 5	C A	51 105
	1990/1991	AUSTRALIA NEW ZEALAND UNITED STATES	AUSTRALIA NEW ZEALAND UNITED STATES	M, 5 M, 5 M, 5	A C B	6 51 62
	1991/1992	AUSTRALIA AUSTRALIA NEW ZEALAND UNITED STATES	AUSTRALIA AUSTRALIA SPC UNITED STATES	M, 5 M, 5 M, 5 M, 5	A B B B	8 18 37 63
	1992/1993	AUSTRALIA UNITED STATES	AUSTRALIA UNITED STATES	M, 5 M, 5	A B	36 38
	1993/1994	AUSTRALIA UNITED STATES	AUSTRALIA UNITED STATES	M, 5 M, 5	A B	51 36
	1994/1995	AUSTRALIA UNITED STATES	AUSTRALIA UNITED STATES	M, 5 M, 5	A B	47 40
	1995/1996	AUSTRALIA	AUSTRALIA	M, 5	A	5

1 Time : M - Month; Q - Quarter; Y - Year
Area : 0 - not stratified by area; 1 - 1° square; 5 - 5° square; X - 10° square;
Y - 5° latitude x 10° longitude; Z - 10° latitude x 20° longitude

2 Available catch data; A - catch in numbers and weight available; B - catch in numbers available only; C - catch in weight available only.

Table 4. Length Frequency data held in the SPAR database

Gear	Year	Flag	Source	Time Area	Number of samples
DRIFTNET	1988/1989	JAPAN	JAPAN	M, Y	16180
	1989/1990	JAPAN	JAPAN	M, Y	35344
JAPAN		SPC	M, S	6995	
LONGLINE	1962	JAPAN	UNITED STATES	M, S	3545
		KOREA	UNITED STATES	M, S	350
1963	JAPAN KOREA	UNITED STATES	M, S	16319	
		UNITED STATES	M, S	1874	
1964	JAPAN KOREA TAIWAN	UNITED STATES	M, S	12921	
		UNITED STATES	M, S	2344	
		UNITED STATES	M, S	1312	
1965	JAPAN KOREA TAIWAN	UNITED STATES	M, S	12190	
		UNITED STATES	M, S	5998	
		UNITED STATES	M, S	3673	
1966	JAPAN KOREA TAIWAN	UNITED STATES	M, S	10270	
		UNITED STATES	M, S	9404	
		UNITED STATES	M, S	13062	
1967	JAPAN KOREA TAIWAN	UNITED STATES	M, S	9240	
		UNITED STATES	M, S	11532	
		UNITED STATES	M, S	16448	
1968	JAPAN KOREA TAIWAN	UNITED STATES	M, S	4471	
		UNITED STATES	M, S	10219	
		UNITED STATES	M, S	13025	
1969	JAPAN KOREA TAIWAN	UNITED STATES	M, S	1907	
		UNITED STATES	M, S	13977	
		UNITED STATES	M, S	9751	
1970	JAPAN KOREA TAIWAN	UNITED STATES	M, S	798	
		UNITED STATES	M, S	12186	
		UNITED STATES	M, S	11216	
1971	JAPAN KOREA TAIWAN	UNITED STATES	M, S	540	
		UNITED STATES	M, S	11780	
		UNITED STATES	M, S	11433	
1972	JAPAN KOREA TAIWAN	UNITED STATES	M, S	50	
		UNITED STATES	M, S	10232	
		UNITED STATES	M, S	10999	
1973	KOREA TAIWAN	UNITED STATES	M, S	15419	
		UNITED STATES	M, S	11745	
1974	KOREA TAIWAN	UNITED STATES	M, S	10489	
		UNITED STATES	M, S	7728	
1975	KOREA TAIWAN	UNITED STATES	M, S	6170	
		UNITED STATES	M, S	3295	
1976	KOREA TAIWAN	UNITED STATES	M, S	6644	
		UNITED STATES	M, S	2407	
1977	KOREA KOREA TAIWAN TAIWAN	UNITED STATES	M, 0	100	
		UNITED STATES	M, S	5747	
		UNITED STATES	M, 0	367	
		UNITED STATES	M, S	4554	
1978	KOREA KOREA TAIWAN TAIWAN	UNITED STATES	M, 0	374	
		UNITED STATES	M, S	2960	
		UNITED STATES	M, 0	334	
		UNITED STATES	M, S	1355	
1979	KOREA KOREA TAIWAN TAIWAN	UNITED STATES	M, 0	553	
		UNITED STATES	M, S	2353	
		UNITED STATES	M, 0	405	
		UNITED STATES	M, S	906	
1980	KOREA KOREA TAIWAN TAIWAN	UNITED STATES	M, 0	180	
		UNITED STATES	M, S	1107	
		UNITED STATES	M, 0	387	
		UNITED STATES	M, S	527	
1981	KOREA TAIWAN TAIWAN	UNITED STATES	M, S	306	
		UNITED STATES	M, 0	80	
		UNITED STATES	M, S	151	
1982	KOREA KOREA TAIWAN TAIWAN	UNITED STATES	M, 0	125	
		UNITED STATES	M, S	950	
		UNITED STATES	M, 0	50	
		UNITED STATES	M, S	221	

Table 4. Length Frequency data held in the SPAR database (continued)

Gear	Year	Flag	Source	Time Area	Number of samples
LONGLINE	1983	KOREA	UNITED STATES	M,0	105
		KOREA	UNITED STATES	M,5	1426
		TAIWAN	UNITED STATES	M,0	560
		TAIWAN	UNITED STATES	M,5	863
	1984	KOREA	UNITED STATES	M,0	228
		KOREA	UNITED STATES	M,5	4296
		TAIWAN	UNITED STATES	M,0	695
		TAIWAN	UNITED STATES	M,5	3465
	1985	KOREA	UNITED STATES	M,0	474
		KOREA	UNITED STATES	M,5	4285
		TAIWAN	UNITED STATES	M,0	101
		TAIWAN	UNITED STATES	M,5	3326
	1986	JAPAN	JAPAN	Q,Z	1068
		KOREA	UNITED STATES	M,0	300
		KOREA	UNITED STATES	M,5	4379
		TAIWAN	UNITED STATES	M,0	300
		TAIWAN	UNITED STATES	M,5	5697
	1987	JAPAN	AUSTRALIA	M,5	90
		JAPAN	JAPAN	Q,Z	2143
		JAPAN	UNITED STATES	M,0	50
		KOREA	UNITED STATES	M,0	400
		KOREA	UNITED STATES	M,5	3425
		TAIWAN	UNITED STATES	M,0	150
	1988	JAPAN	UNITED STATES	M,5	5526
		JAPAN	AUSTRALIA	M,5	436
		JAPAN	JAPAN	Q,Z	1724
		KOREA	UNITED STATES	M,0	650
		KOREA	UNITED STATES	M,5	2750
		TAIWAN	UNITED STATES	M,0	2213
	1989	TAIWAN	UNITED STATES	M,5	2894
		JAPAN	AUSTRALIA	M,5	391
		KOREA	UNITED STATES	M,0	850
		KOREA	UNITED STATES	M,5	2221
		TAIWAN	SPC	M,0	525
		TAIWAN	SPC	M,5	13
		TAIWAN	UNITED STATES	M,0	3642
		TAIWAN	UNITED STATES	M,5	1541
		UNKNOWN	UNITED STATES	Y,0	100
		1990	NEW CALEDONIA	SPC	M,5
	NEW CALEDONIA		SPC	M,Z	680
	KOREA		UNITED STATES	M,0	900
	KOREA		UNITED STATES	M,5	900
	TAIWAN		SPC	M,0	107
	TAIWAN		UNITED STATES	M,0	2976
	TAIWAN		UNITED STATES	M,5	2087
	TONGA		SPC	M,0	31
	1991	FIJI	SPC	M,0	62
		FIJI	SPC	M,5	100
		NEW CALEDONIA	SPC	M,5	2764
		NEW CALEDONIA	SPC	M,Z	666
KOREA		SPC	M,0	93	
KOREA		UNITED STATES	M,0	1350	
KOREA		UNITED STATES	M,5	250	
TAIWAN		SPC	M,0	2690	
TAIWAN		UNITED STATES	M,0	4541	
TAIWAN		UNITED STATES	M,5	2200	
1992	FIJI	SPC	M,0	326	
	FIJI	SPC	M,5	4261	
	NEW CALEDONIA	SPC	M,5	657	
	NEW CALEDONIA	SPC	M,Z	1177	
	KOREA	SPC	M,0	829	
	KOREA	UNITED STATES	M,0	99	
	TAIWAN	SPC	M,0	3722	
	TAIWAN	UNITED STATES	M,0	4332	
	TAIWAN	UNITED STATES	M,5	2128	
1993	FIJI	FIJI	M,0	225	
	NEW CALEDONIA	NEW CALEDONIA	M,Y	1864	
	KOREA	FIJI	M,0	166	
	TAIWAN	FIJI	M,0	6373	
	TAIWAN	UNITED STATES	M,0	3750	
	TAIWAN	UNITED STATES	M,5	1300	
1994	FIJI	FIJI	M,0	3041	
	NEW CALEDONIA	NEW CALEDONIA	M,Y	1293	
	TAIWAN	FIJI	M,0	4018	
	TAIWAN	UNITED STATES	M,0	100	
	UNITED STATES	FIJI	M,0	35	

Table 4. Length Frequency data held in the SPAR database (continued)

Gear	Year	Flag	Source	Time Area	Number of samples
LONGLINE	1995	FIJI	FIJI	M,0	1553
		TAIWAN	FIJI	M,0	3883
		TONGA	TONGA	M,Y	151
		UNITED STATES	FIJI	M,0	42
TROLL	1986/1987	NEW ZEALAND	NEW ZEALAND	M,Y	274
		UNITED STATES	FRENCH POLYNESIA	M,0	538
		UNITED STATES	FRENCH POLYNESIA	M,Y	779
		UNITED STATES	UNITED STATES	M,0	260
		UNITED STATES	UNITED STATES	M,Y	1017
	1987/1988	NEW ZEALAND	NEW ZEALAND	M,Y	570
		UNITED STATES	FRENCH POLYNESIA	M,0	1783
		UNITED STATES	FRENCH POLYNESIA	M,Y	1361
		UNITED STATES	UNITED STATES	M,0	3246
		UNITED STATES	UNITED STATES	M,Y	1449
	1988/1989	NEW ZEALAND	NEW ZEALAND	M,Y	438
		NEW ZEALAND	SPC	M,5	7888
		UNITED STATES	FRENCH POLYNESIA	M,0	2943
		UNITED STATES	FRENCH POLYNESIA	M,Y	1779
		UNITED STATES	SPC	M,5	2671
		UNITED STATES	UNITED STATES	M,Y	17582
	1989/1990	FIJI	SPC	M,0	38
		NEW ZEALAND	NEW ZEALAND	M,Y	2054
		NEW ZEALAND	SPC	M,5	55294
		UNITED STATES	FRENCH POLYNESIA	M,0	599
UNITED STATES		FRENCH POLYNESIA	M,Y	275	
UNITED STATES		SPC	M,5	436	
UNITED STATES		UNITED STATES	M,Y	3732	
1990/1991		FIJI	SPC	M,5	703
	FRENCH POLYNESIA	FRENCH POLYNESIA	M,0	1360	
	NEW ZEALAND	SPC	M,5	19529	
	UNITED STATES	FRENCH POLYNESIA	M,0	1740	
	UNITED STATES	FRENCH POLYNESIA	M,Y	1759	
	UNITED STATES	SPC	M,5	15751	
	UNITED STATES	UNITED STATES	M,Y	8088	
1991/1992	AUSTRALIA	AUSTRALIA	M,5	8350	
	FRENCH POLYNESIA	FRENCH POLYNESIA	M,0	96	
	FRENCH POLYNESIA	SPC	M,5	1575	
	NEW ZEALAND	NEW ZEALAND	M,5	12411	
	NEW ZEALAND	SPC	M,5	11671	
	UNITED STATES	FRENCH POLYNESIA	M,0	1232	
	UNITED STATES	NEW ZEALAND	M,5	429	
	UNITED STATES	SPC	M,5	6593	
	1992/1993	UNITED STATES	UNITED STATES	M,0	209
		UNITED STATES	UNITED STATES	M,Y	400
1993/1994	UNITED STATES	UNITED STATES	M,0	104	
	UNITED STATES	UNITED STATES	M,Y	488	
1994/1995	UNITED STATES	UNITED STATES	M,0	100	
	UNITED STATES	UNITED STATES	M,Y	1159	

- 1 Time : M - Month; Q - Quarter; Y - Year
Area : 0 - not stratified by area; 1 - 1° square; 5 - 5° square; X - 10° square;
Y - 5° latitude x 10° longitude; Z - 10° latitude x 20° longitude