



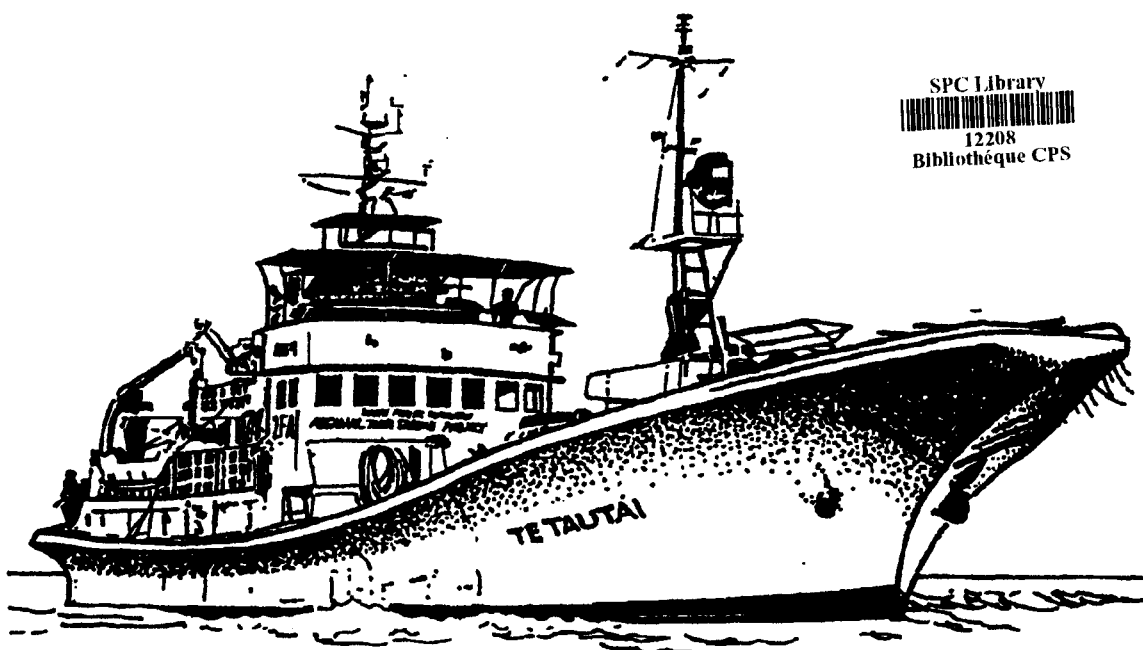
LIBRARY  
Secretariat of the Pacific Community



## REGIONAL TUNA TAGGING PROJECT

# *TAGGING SUMMARY*

APRIL 1995 - JULY 1996



SPC Library  
12208  
Bibliothèque CPS

South Pacific Commission  
Noumea, New Caledonia

### **FINAL RELEASE TOTALS : All field operations ceased on December 18th 1992**

<b>TAGGING VESSEL</b>	<b>YELLOWFIN RELEASES</b>	<b>SKIPJACK RELEASES</b>	<b>BIGEYE RELEASES</b>	<b>OTHER RELEASES</b>	<b>TOTAL TAGGED</b>
Soltai 6, 8, 12	574	7,729	1	0	8,304
Nei Kaneati	1,058	3,165	43	0	4,266
Trapper/Sunbird	930	2,824	4	0	3,758
Inquirer	21	0	23	0	44
Te Tautai	30,795	78,540	6,695	82	116,112
Japanese GS	144	118	30	0	292
<b>GRAND TOTAL</b>	<b>33,522</b>	<b>92,376</b>	<b>6,796</b>	<b>82</b>	<b>132,776</b>

### **PATTERN OF RECOVERIES**

During the fifteen months since the last tagging summary was prepared in late March 1995, a further 101 tags have been received, maintaining the steady but declining flow of returns since the tagging concluded in December 1992.

Returns were again dominated by bigeye (83), followed by yellowfin (16) and skipjack (2). This is consistent with the greater longevity of the larger tunas, with some of the returns now from four years and four and a half years after the release of medium-sized fish (80-100cm). Longliners provided the great majority of returns (94), with only 5 from purse seiners.

Features of the returns from each species were :-

#### **Bigeye**

- all but one of the 83 returns were from longliners, 67 by Australian domestic longliners (many bigeye releases were in the Coral Sea), 6 each by Japanese and Korean longliners, and two by Taiwanese longliners.
- bigeye released in the Coral Sea were mostly recovered nearby, but with movement to Fiji, Vanuatu, Solomon Islands, FSM, Kiribati and for the first time, as far east as 133°W (4651 nm displacement, in one case). Releases in Kiribati and nearby waters were generally recaptured within 1000 nm of the release point.
- large growth increments were consistently recorded for the long term recoveries, over 70 cm in some cases.
- bigeye recoveries now total 577 from 6,796 releases ( 8.5%).

#### **Yellowfin**

- 12 of the 16 returns were from longliners (4 Australian, 3 Japan, 2 Korean) and the balance from purse seiners (3 US, 1 Japan). 10 returns were from Coral Sea releases, 2 each from Fiji and New Caledonia releases, and the others from Wallis/Futuna and FSM.
- the recoveries of Coral Sea releases were notable for two in Japanese home waters (by a purse seiner and longliner), one near Jarvis Island (3186 nm displacement) and another in Kiribati waters.
- large growth increments were recorded (eg 31cm to 128 cm in 1133 days, 50 to 140 cm in 1289 days)
- yellowfin recoveries now total 3,478 from 33,522 releases (10.4%).

## **Skipjack**

- the two skipjack returns, both PNG releases were accompanied by incomplete recapture data.
- skipjack returns, all but complete, now total 10,740 from 92,376 releases (11.6%).

### **SOUTH PACIFIC ALBACORE**

Concurrent with the RTTP, an EC-funded albacore tagging project was carried out from 1990 to 1992, to gain much needed information on the albacore resource at a time when exploitation was increasing rapidly. Tagging had earlier been carried out (1986-1989) by NMFS, ORSTOM and MAF (NZ). The results of these experiments have previously been reported separately, but are summarized here for completeness.

#### **Release numbers and area**

A total of 17,226 albacore was released between 1986 and 1992, mostly (76%) along the Sub-Tropical Convergence Zone (SCTZ), between 35°S to 47°S, and 170-130°W. Most releases were made during the 1990-92 season by the joint SPC-MAF programme (>60%). Most fish were caught by trolling.

#### **Recaptures**

A total of 178 recaptures had been received by June 30<sup>th</sup> 1996, with over 60% of these after two years at liberty and up to nearly 8 years at liberty so far. Most recaptures were from the SPC/MAF releases (146/178), at a return rate for those releases of 1.5%.

The great majority of returns were from longliners, which provided 160 of the 178 returns, and Taiwanese longliners the bulk of these.

#### **Movement**

The attached arrow map shows the distribution of release and recapture locations, where known, for all recoveries. Wide dispersal to the east, west and north of the release locations is evident, with the average distance between release and recapture location 950nm. Only one fish has been recaptured in the northern hemisphere (near the Marshall Islands), not sufficient so far to refute the existence of two separate stocks in the North and South Pacific, and of limited exchange between the two hemispheres.

The tagging data have also been used to generate estimates of growth and mortality rates, as detailed in a recent paper to SPAR6 (Bertignac, Lehodey and Hampton, 1996).

# **CANNERY/TRANSHIPMENT RECOVERIES**

<b>A) YELLOWFIN</b>	<b>SINCE</b>	<b>TOTAL</b>
<b>COUNTRY</b>	<b>22/03/95</b>	<b>09/07/96</b>
SOLOMON ISLANDS	0	3
UNITED STATES	0	0
JAPAN	0	2
PHILIPPINES	0	314
KOREA	0	0
TINIAN	0	55
PALAU	0	0
INDONESIA	0	17
PUERTO RICO	0	56
THAILAND	0	641
AMERICAN SAMOA	1	296
MARSHALL ISLAND	0	0
OTHER/UNKNOWN	2	4
<b>TOTAL</b>	<b>3</b>	<b>1388</b>

<b>B) SKIPJACK</b>	<b>SINCE</b>	<b>TOTAL</b>
<b>COUNTRY</b>	<b>22/03/95</b>	<b>09/07/96</b>
SOLOMON ISLANDS	0	18
UNITED STATES	0	2
JAPAN	1	1
PHILIPPINES	0	825
KOREA	0	0
TINIAN	0	116
PALAU	0	0
INDONESIA	0	73
PUERTO RICO	0	221
THAILAND	0	1533
AMERICAN SAMOA	0	1481
MARSHALL ISLAND	0	0
OTHER/UNKNOWN	0	8
<b>TOTAL</b>	<b>1</b>	<b>4278</b>

<b>C) BIGEYE</b>	<b>SINCE</b>	<b>TOTAL</b>
<b>COUNTRY</b>	<b>22/03/95</b>	<b>09/07/96</b>
SOLOMON ISLANDS	0	0
UNITED STATES	0	0
JAPAN	2	3
PHILIPPINES	0	27
KOREA	0	0
TINIAN	0	16
PALAU	0	0
INDONESIA	0	1
PUERTO RICO	0	19
THAILAND	0	41
AMERICAN SAMOA	0	63
MARSHALL ISLAND	0	0
OTHER/UNKNOWN	0	7
<b>TOTAL</b>	<b>2</b>	<b>177</b>

<b>TOTALS</b>	<b>6</b>	<b>5843</b>
---------------	----------	-------------

## RECOVERIES TO DATE

### A) YELLOWFIN

NATIONALITY OF RECAPTURE VESSEL	SINCE 22 MARCH 1995							TOTAL RECOVERIES						
	PS	PL	LL	TR	HL	UN	TOT	PS	PL	LL	TR	HL	UN	TOTAL
SOLOMON ISLANDS	0	0	1	0	0	0	1	205	41	1	2	0	11	260
UNITED STATES	3	0	0	0	0	0	3	431	0	0	0	1	0	432
JAPAN	1	0	3	0	0	0	4	451	1	17	0	0	9	478
PHILIPPINES	0	0	0	0	0	0	0	861	0	2	9	60	8	940
KOREA	0	0	2	0	0	0	2	267	0	3	0	0	0	270
TAIWAN	0	0	1	0	0	0	1	252	0	3	0	0	0	255
PALAU	0	0	0	0	0	0	0	0	8	0	0	0	1	9
INDONESIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USSR	0	0	0	0	0	0	0	1	0	0	0	0	0	1
FSM	0	0	0	0	0	0	0	16	0	2	2	4	0	24
KIRIBATI	0	0	0	0	0	0	0	0	5	0	2	0	0	7
FIJI	0	0	0	0	0	0	0	0	35	0	1	0	0	36
AUSTRALIA	0	0	4	0	0	0	4	35	4	32	0	0	0	71
OTHER/UNKNOWN	0	0	1	0	0	0	1	197	453	4	3	26	12	695
TOTAL	4	0	12	0	0	0	16	2716	547	64	19	91	41	3478

### B) SKIPJACK

NATIONALITY OF RECAPTURE VESSEL	SINCE 22 MARCH 1995							TOTAL RECOVERIES						
	PS	PL	LL	TR	HL	UN	TOT	PS	PL	LL	TR	HL	UN	TOTAL
SOLOMON ISLANDS	0	0	0	0	0	0	0	982	760	0	11	0	65	1818
UNITED STATES	0	0	0	0	0	0	0	1902	0	1	0	0	0	1903
JAPAN	0	0	0	0	0	1	1	1359	109	1	0	0	8	1477
PHILIPPINES	0	0	0	0	0	0	0	1936	0	0	119	103	38	2196
KOREA	0	0	0	0	0	0	0	602	0	0	0	0	0	602
TAIWAN	0	0	0	0	0	0	0	758	0	2	0	0	0	760
PALAU	0	0	0	0	0	0	0	0	52	0	1	0	0	53
INDONESIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USSR	0	0	0	0	0	0	0	1	0	0	0	0	0	1
FSM	0	0	0	0	0	0	0	37	0	0	11	1	0	49
KIRIBATI	0	0	0	0	0	0	0	0	68	0	5	0	0	73
FIJI	0	0	0	0	0	0	0	0	486	0	0	0	0	486
AUSTRALIA	0	0	0	0	0	0	0	40	0	0	0	0	1	41
OTHER/UNKNOWN	0	0	0	0	0	1	1	312	919	0	6	34	10	1281
TOTAL	0	0	0	0	0	2	2	7929	2394	4	153	138	122	10740

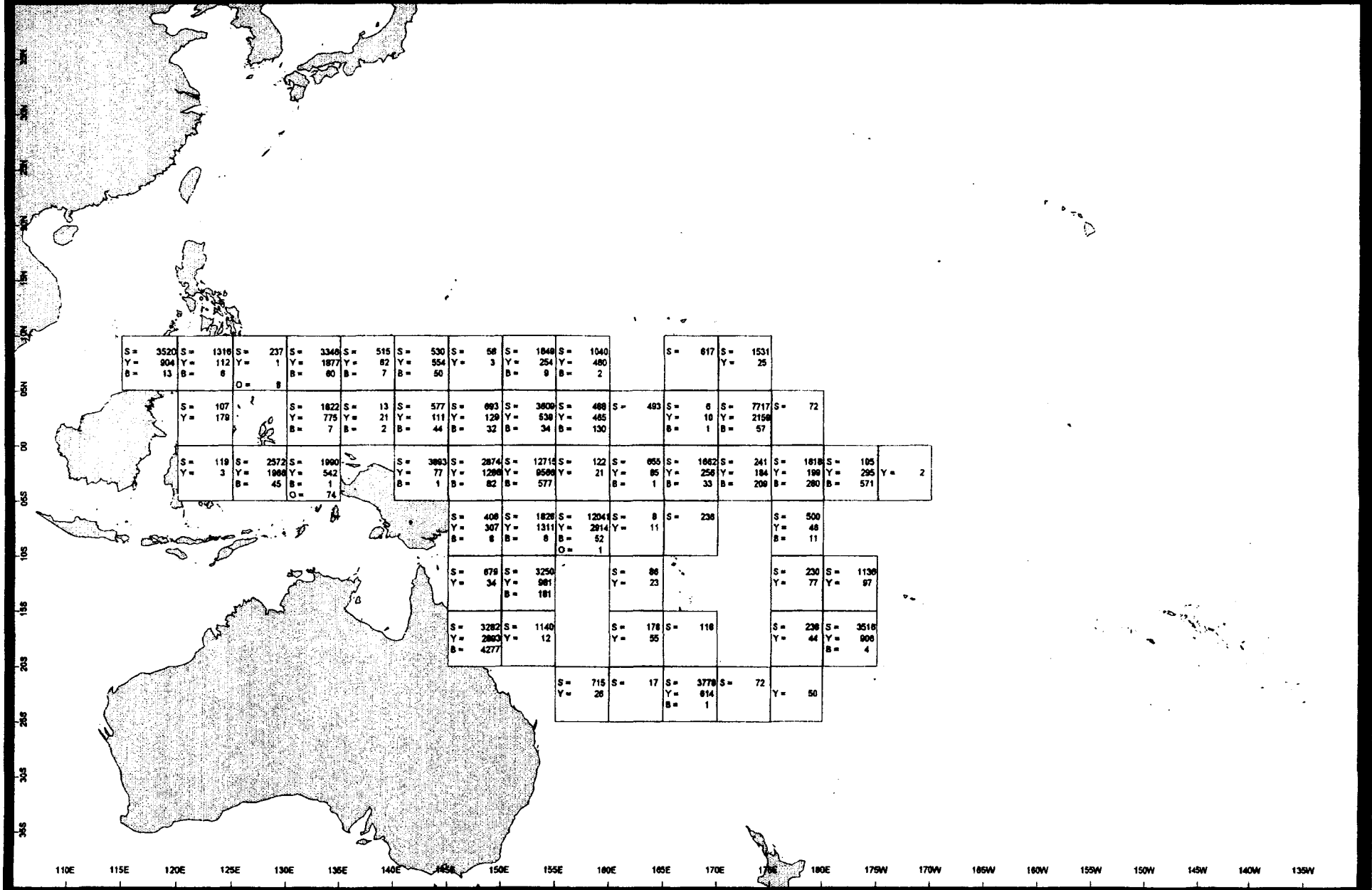
### C) BIGEYE

NATIONALITY OF RECAPTURE VESSEL	SINCE 22 MARCH 1995							TOTAL RECOVERIES						
	PS	PL	LL	TR	HL	UN	TOT	PS	PL	LL	TR	HL	UN	TOTAL
SOLOMON ISLANDS	0	0	0	0	0	0	0	10	0	0	0	0	1	11
UNITED STATES	0	0	1	0	0	0	1	143	0	2	0	0	0	145
JAPAN	1	0	6	0	0	0	7	53	0	27	0	0	3	83
PHILIPPINES	0	0	0	0	0	0	0	62	0	0	0	1	0	63
KOREA	0	0	6	0	0	0	6	13	0	9	0	0	0	22
TAIWAN	0	0	2	0	0	0	2	12	0	3	0	0	0	15
PALAU	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INDONESIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USSR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FSM	0	0	0	0	0	0	0	2	0	0	0	0	0	2
KIRIBATI	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FIJI	0	0	0	0	0	0	0	0	1	1	0	0	0	2
AUSTRALIA	0	0	67	0	0	0	67	1	7	150	0	0	0	158
OTHER/UNKNOWN	0	0	0	0	0	0	0	13	55	5	0	1	2	76
TOTAL	1	0	82	0	0	0	83	309	63	197	0	2	6	577

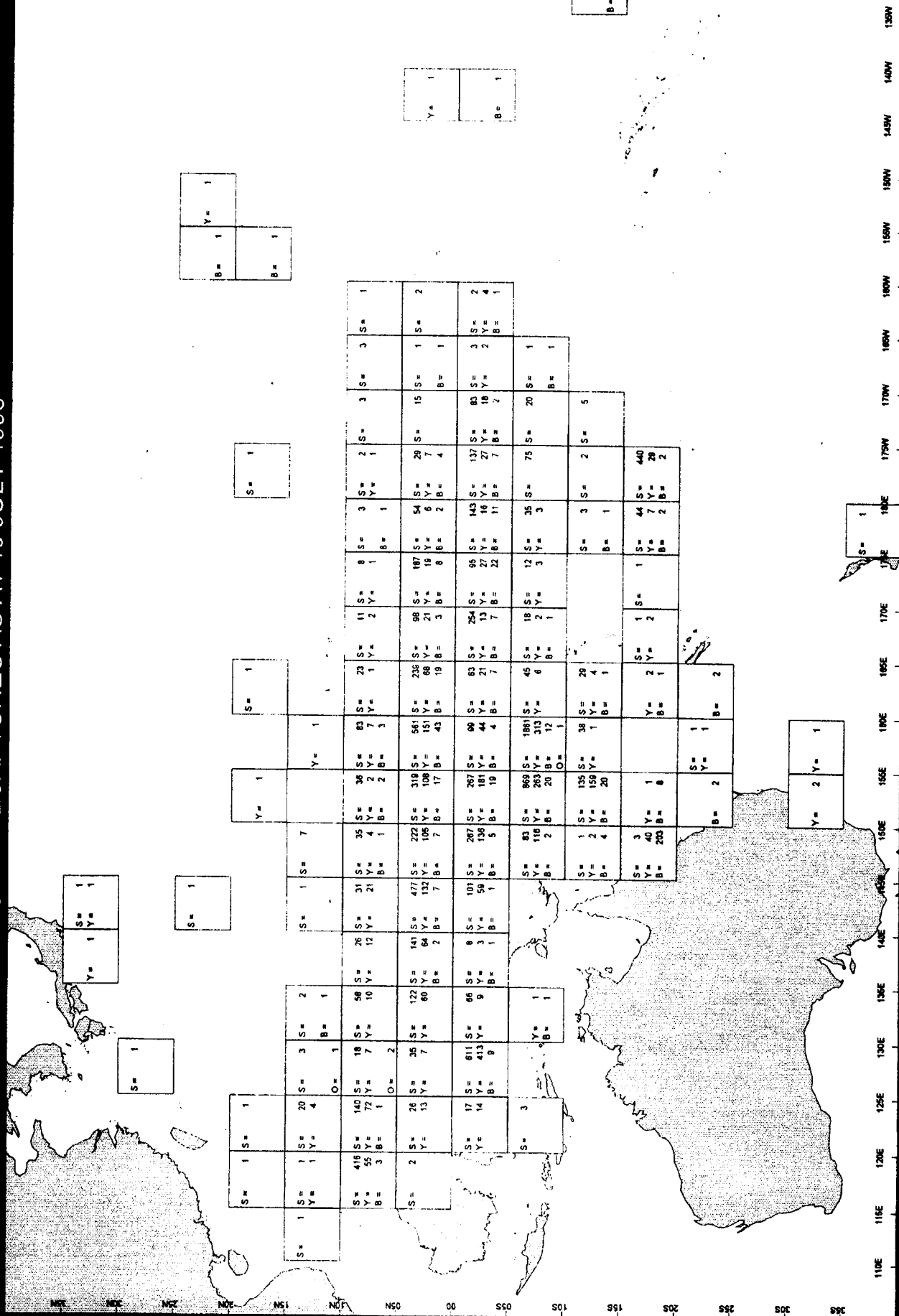
SINCE 22/03/95 101

GRAND TOTAL 14795

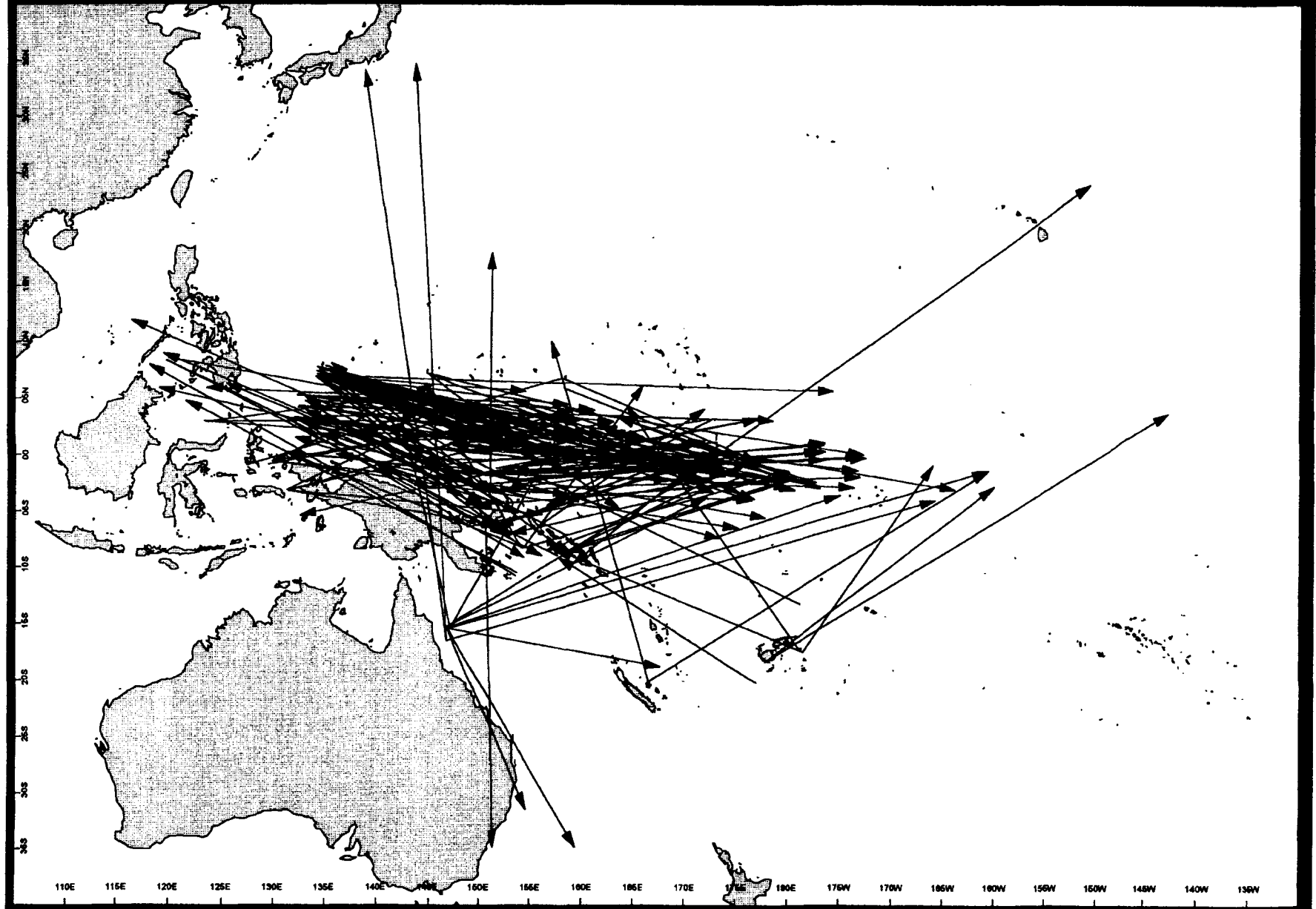
# TOTAL RELEASES



# TOTAL RECAPTURES AS AT 10 JULY 1996

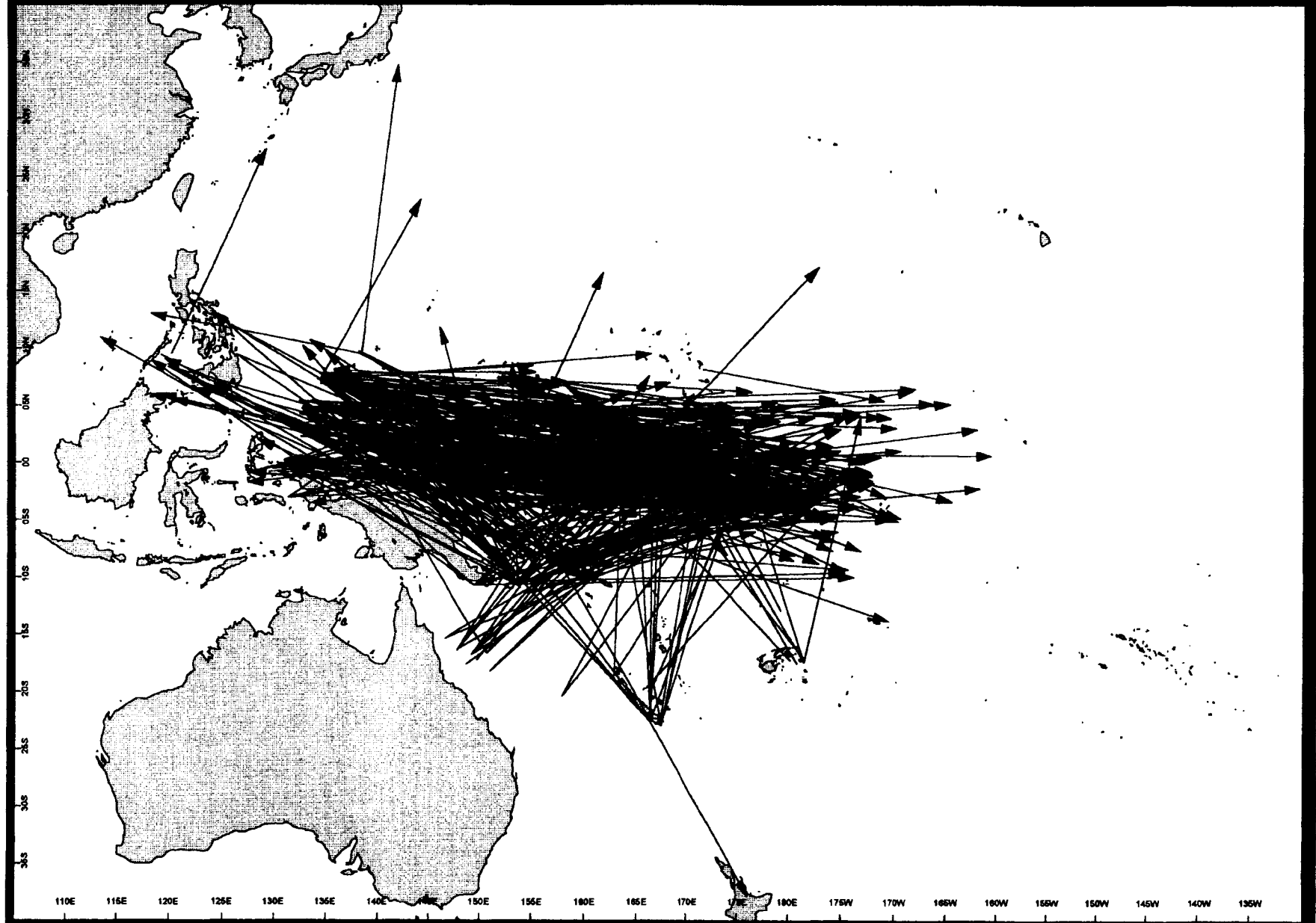


MOVEMENTS OF TAGGED YELLOWFIN > 1000nm

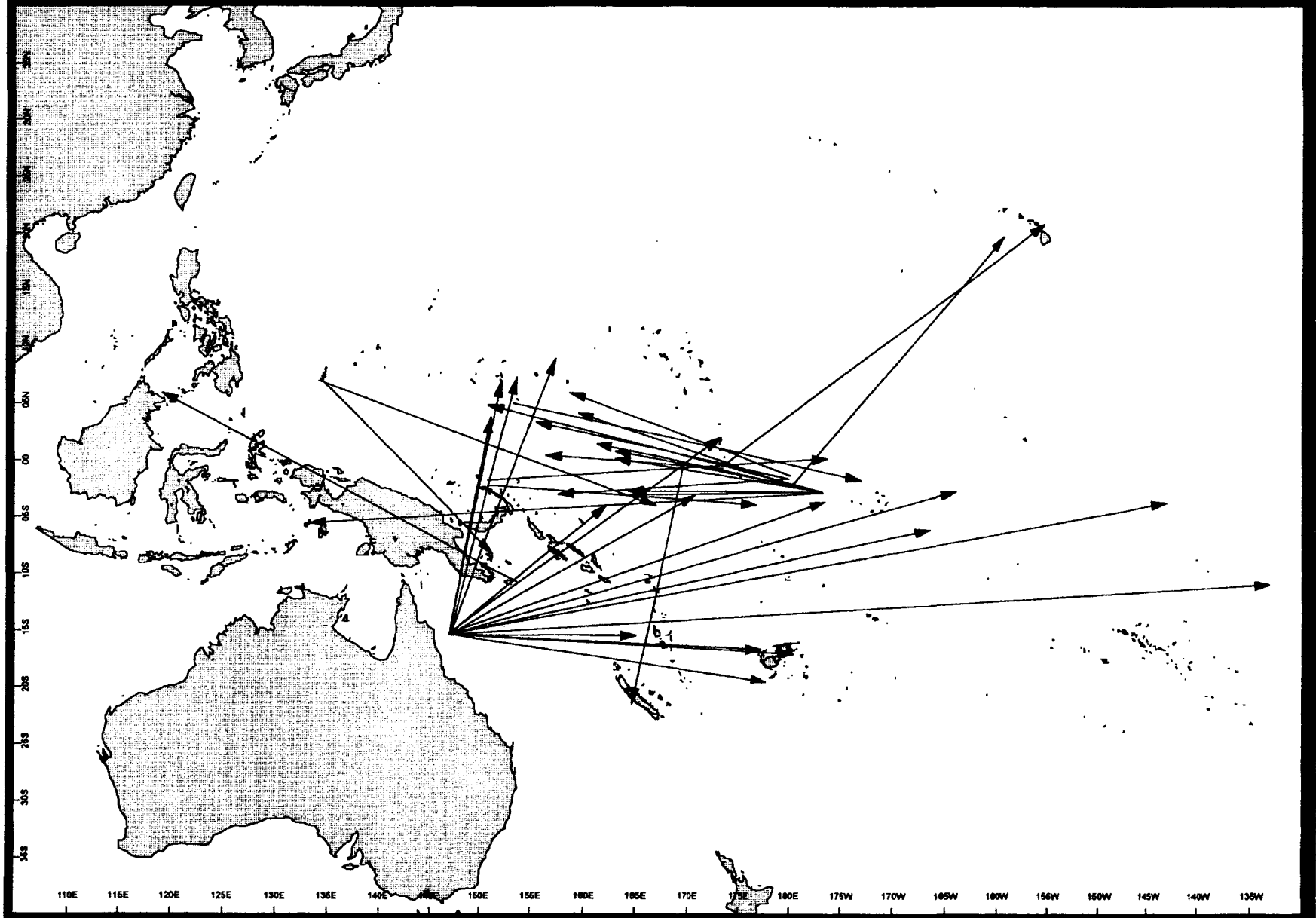




MOVEMENTS OF TAGGED SKIPJACK > 1000nm



# MOVEMENTS OF TAGGED BIGEYE > 1000nm



Handwritten text, possibly a signature or initials, located in the center of the page.

# MOVEMENTS OF TAGGED ALBACORE AS OF JULY 1996

