

PACIFIC TUNA TAGGING PROJECT WP 2

CRUISE REPORT No. 6

4th – 13th June 2009

INTRODUCTION

This report summarizes activities of the sixth cruise of the Pacific Tuna Tagging Project (PTTP) WP2 during a 10 day period in Solomon Islands waters, with departure from Honiara on June 4th, fishing throughout the Main Group Archipelago (MGA) before returning to Noro at the conclusion of the three months WP2 charter.

Scientific personnel onboard the Soltai 105 during Cruise 6 are listed in Table 1 below.

Table 1. SPC and In-Country personal onboard during Cruise 6

Name	Title	Affiliation	Period
Antony Lewis	Cruise leader	SPC contractor	04/06/09 – 13/06/09
Cynthia Wickham	Tagging tech	SPC contractor	19/05/09 – 03/06/09
Hearty Matamaru	Tagging tech	SPC contractor	19/05/09 – 03/06/09
Andrew Hapiria	Observer	Sols Fisheries (MNRD)	19/05/09 – 25/05/09

GENERAL DESCRIPTION OF FISHING ACTIVITY

The initial plan was to fish near Ontong Java and the north-east part of the Solomons EEZ but with continuing bad weather likely, the decision was taken to confine fishing activity to MGA waters. Following departure from Honiara, the vessel initially attempted to fish the array of rafts off south-eastern Malaita, but unable to secure adequate bait supplies, relocated to southern Santa Ysabel. Good bait was obtained, but then no fish (or rafts) were located in the area around Ndai Island, so activity shifted to the Slot. Good fishing was experienced on rafts to the west of Santa Ysabel, and also in the southern half of the Slot despite catching little bait over a full moon period with cloudless skies (the normal full moon break was not taken so close to the end of the charter period).

With adequate bait supplies from Patutiva (Marovo), good fishing was then found on rafts south of Vangunu before extending effort to southern Choiseul. Very little fish was initially found working across the Slot, but with full bait tanks, an excellent final day's fishing was enjoyed on rafts north of Vella Lavella before heading in port at the end of the cruise.

The track of the cruise, based on school and noon positions, is found below as **Figure 1** and a summary of general movements during the cruise and daily tag release numbers follows as **Table 1**. A compilation of the daily log extracts, detailing daily activities, is provided as **Appendix 1**.

Figure 1. Track during WP 2 Cruise 6, 4th – 13th June 2009, showing 1800 hrs position and the positions of schools fished

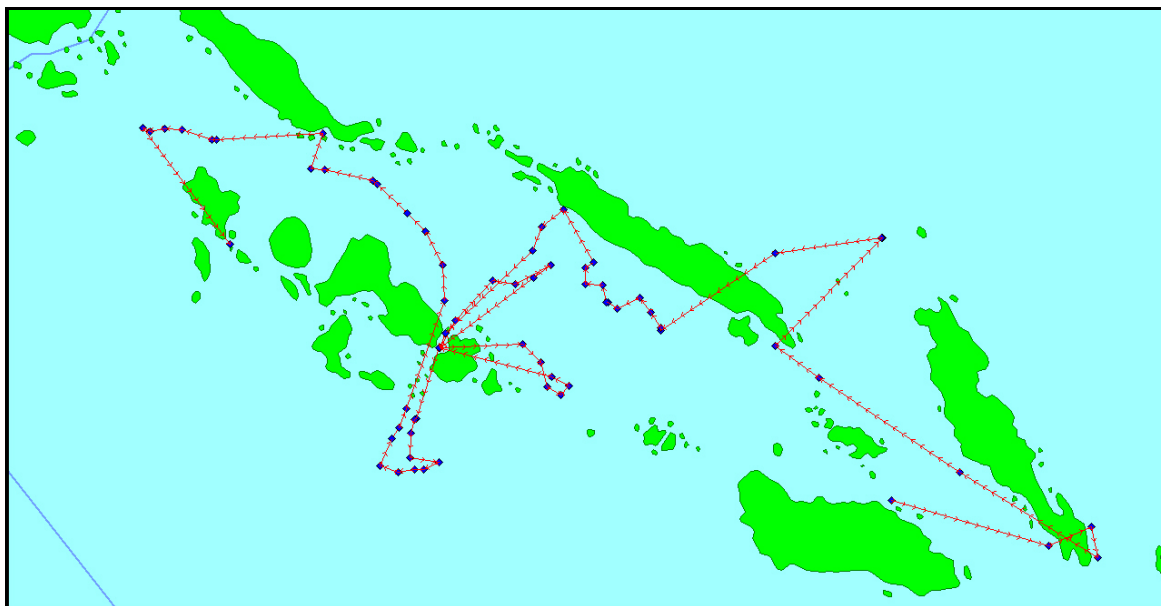


Table 1. Summary of Cruise 6 activity, with number of tagged fish released per day

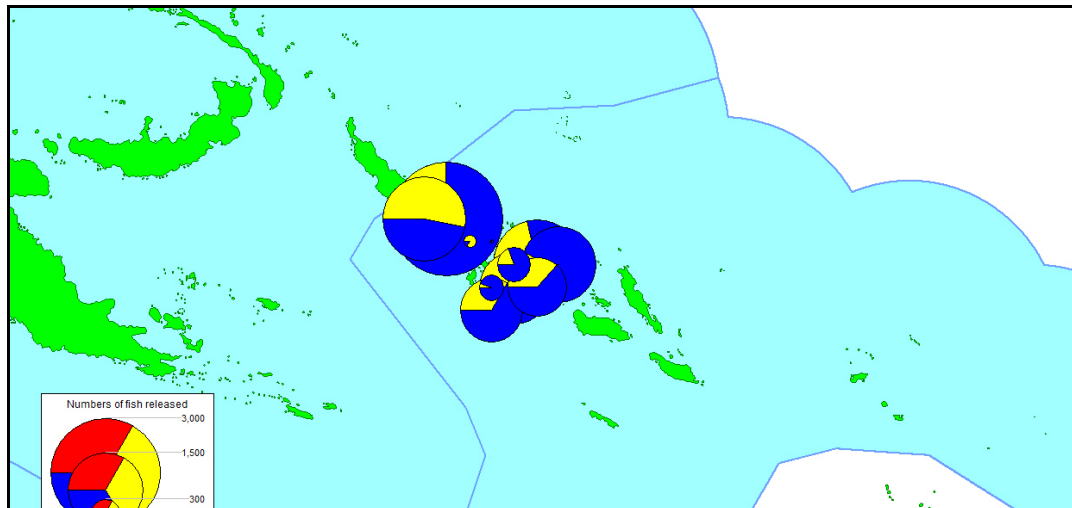
Dates	Activity	Tag releases			
		SJ	YF	BE	TOTAL
June 4 th	Depart Honiara for south-east Malaita; baiting Fanalei				-
June 5 th	Steaming to Thousand Ships Bay, Ysabel; baiting				-
June 6 th	Fishing around Ndai Island				0
June 7 th	Fishing west coast of Ysabel; baiting Kolokofa	3044	392		3426
June 8 th	Fishing across Slot; baiting Patutiva	305	73		378
June 9 th	Fishing central Slot; baiting Patutiva	63	79	1	143
June 10 th	Fishing east of Gatokae; baiting Patutiva	1170	1244	1	2415
June 11 th	Fishing south of Vangunu; baiting Patutiva	933	380		1313
June 12 th	Fishing across north-central Slot; baiting Posarae	22	76		98
June 13 th	Fishing north of Vella Lavella; steaming to Noro	3336	1825	2	5163
	TOTAL	8873	4069	4	12946

TAG RELEASES

All ten days of the short cruise were spent in Solomons waters, and nearly all in MGA (Main Group Archipelago) waters. Eight days were spent fishing, and two days steaming without bait. The majority of fishing days were productive, with only one zero catch day (no sightings of fish or rafts), and one day with less than 100 fish. On three of the eight days, more than 2,000 fish were tagged, including a record day where over 5000 fish were tagged. In total, **12,946** tuna were tagged with conventional tags, at an average of 1618 fish per fishing day. Releases of conventional tags comprised 8,873 skipjack (68.5%), 4,069 yellowfin (31.5%) and just 4 bigeye. No archival tags were deployed during the short cruise.

The Cruise 6 releases are summarized by school in **Table 3**, while **Figure 2** below shows the distribution of the releases in Solomons waters by 0.5 degree square, by species.

Figure 2. Distribution of releases by half degree square, by species, for WP2 Cruise 6 (04/06 to 13/06/2009)



All but 11 fish were tagged on anchored FADs deployed by the two purse seine companies fishing in the Solomon Islands MGA, with one drifting FAD producing the other 11 fish. The releases were widely distributed throughout the Slot and adjacent waters, from south of Vagunu to north of Vella Lavella.

55% of the releases were the larger 13cm P tags, with skipjack comprising 84% of these releases whereas yellowfin made up a slight majority (51%) of the releases of smaller Z tags.

ARCHIVAL TAG SUMMARY

No archival tags were released during Cruise 6.

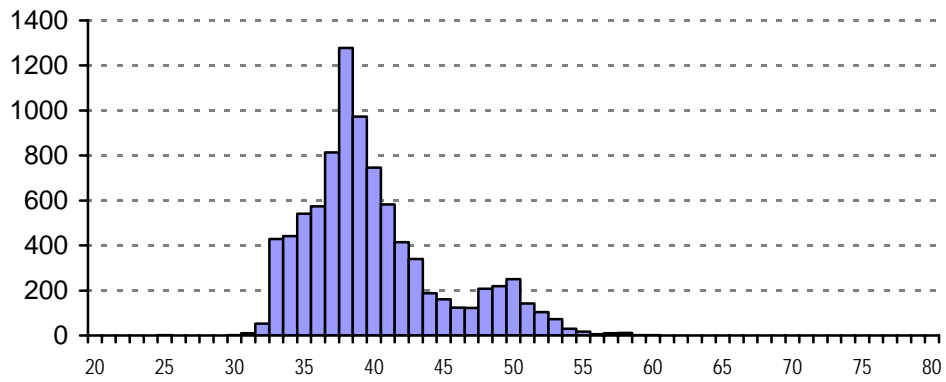
SIZE DISTRIBUTION OF TAGGED FISH

Figure 3 shows the size distribution of fish tagged during the cruise.

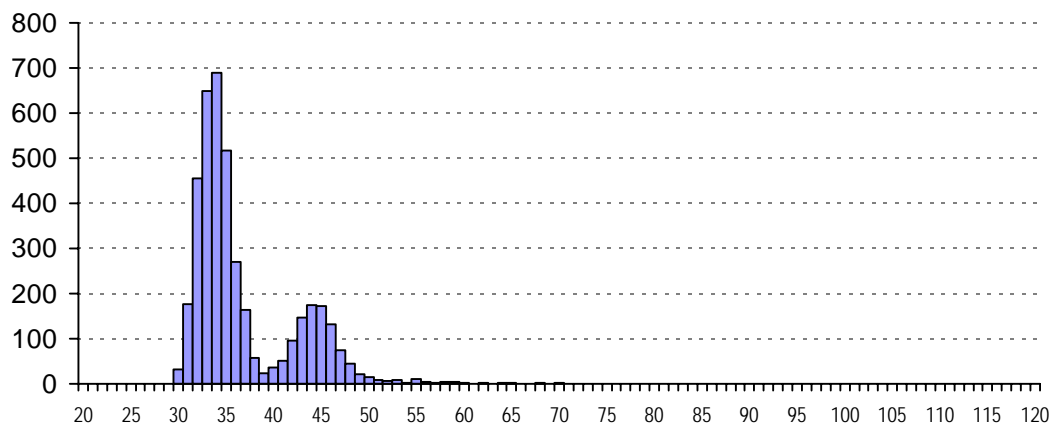
Skipjack were mostly 35-45cm fish, centring on 38cm, but with a smaller number of larger fish around 50cm. Yellowfin releases show two clear size modes – small fish (the majority) centred on 33cm with a second mode of larger fish at around 45cm, and small tail of larger fish to 70cm.. The almost insignificant number of bigeye small fish, below 35 cm..

Figure 3. Size distribution of fish tagged during Cruise 6 (04/6 to 13/6/2009)

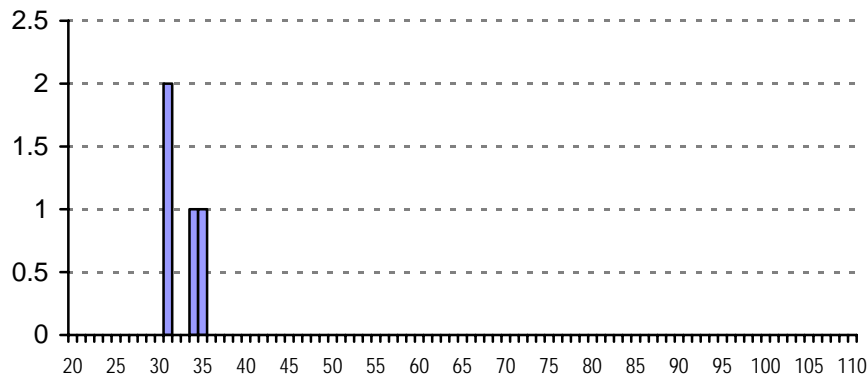
SKIPJACK n = 8868



YELLOWFIN n = 4068



BIGEYE n = 4



BAITING

Baiting was initially poor, with full moon falling on the third night of the cruise and clear cloudless skies prevailing. Despite that, good bait was obtained at 1000 Ships Bay, the night before full moon, then bait catches rapidly improving from three nights after the full moon. More than 200 bkts were obtained on each of three nights, but less than 200 bkts total on the other four nights baiting.

The good catches were dominated by gold and blue anchovy (*Encrasicholina devisi*, *E. heterolobus*), mixed with sprats (*Spratelloides lewisi* and some *S. gracilis*) and small gold-spot herring (*Herklotsichthys quadrimaculatus*). With the good catches experienced, bait was generally used the day of capture.

Table 2. Summary of baitfishing activity during WP2 Cruise 6

Date	Location	Catch (bkts loaded, hauls)	Species
June 4 th	Fanalei	7 (2)	Little priest
June 5 th	Kirighi Is, San Jorge	300 (2)	Anchovy (d, p)
June 7 th	Kolokofa	18 (3)	Anchovy, sprat (l)
June 8 th	Patutiva	29 (4)	Anchovy, Hq, weak herring
June 9 th	Patutiva	101 (3)	Anchovy (d,h), Hq, weak herring
June 10 th	Patutiva	208 (3)	Anchovy (d,h) sprat (l), Hq
June 11 th	Posarae	276 (2)	Anchovy (d,h), sprat (g,l)
	TOTAL	938 (19)	

CONCLUSIONS

Full advantage was taken of the decision to spend the final short cruise of WP2 fishing the Slot and surrounding, with a large number of fish tagged and released during the 10 days, with a good percentage of yellowfin in the catch (31.5%). This has provided releases for a third year in Solomon Island waters, enhancing the overall objectives of the PTTTP.

The end of the cruise saw farewell to Cynthia Wickham who had worked tirelessly and effectively throughout the last 15 months of PTTTP activity. Regular maintenance will be undertaken on the vessel before it departs on the final three months PTTTP cruise (WP3) on July 13th.

TABLE 3. Tag releases (all tags) by school during PTPP Phase 2 Cruise 6

Project Western Pacific #2 - PTPP Phase 2					Cruise		6 To	6	Vessel Soltai 105			TAG TOTALS			SHK
Event no	Tagged sch no.	Date	Lat	Lon	Sch type	Assoc.	Start	Stop	YFT	BET	SKJ	OTH	TOTAL	bite	
4	1	07-Jun-2009	0816.622S	15900.663E	1	3	0750	0850	35	0	1493	0	1528	10	
5	2	07-Jun-2009	0820.437S	15853.085E	2	3	1000	1120	196	0	1349	0	1545	12	
9	3	07-Jun-2009	0806.637S	15842.173E	1	3	1448	1508	18	0	162	0	180	0	
10	4	07-Jun-2009	0804.897S	15845.138E	1	3	1529	1555	143	0	40	0	183	2	
11	5	08-Jun-2009	0800.947S	15824.541E	3	3	0700	0743	73	0	305	0	378	4	
14	6	09-Jun-2009	0805.823S	15830.755E	1	3	1035	1105	79	1	63	0	143	1	
15	7	10-Jun-2009	0838.346S	15827.306E	2	3	0700	0800	575	0	473	0	1048	7	
16	8	10-Jun-2009	0846.481S	15829.286E	2	3	0900	0925	302	1	72	0	375	1	
17	9	10-Jun-2009	0849.110S	15833.970E	1	3	1000	1020	26	0	293	0	319	1	
18	10	10-Jun-2009	0845.978S	15836.719E	2	3	1045	1115	341	0	332	0	673	4	
19	11	11-Jun-2009	0857.361S	15744.635E	1	3	0635	0640	3	0	4	0	7	0	
20	12	11-Jun-2009	0901.905S	15743.670E	1	3	0720	0750	150	0	186	0	336	3	
21	13	11-Jun-2009	0909.922S	15743.326E	1	4	0854	0905	2	0	9	0	11	0	
23	14	11-Jun-2009	0914.046S	15747.812E	1	3	1130	1140	15	0	21	0	36	1	
24	15	11-Jun-2009	0914.885S	15739.355E	1	3	1234	1300	97	0	258	0	355	6	
25	16	11-Jun-2009	0912.555S	15733.076E	1	3	1400	1440	61	0	231	0	292	5	
26	17	11-Jun-2009	0903.526S	15737.018E	1	3	1550	1605	44	0	18	0	62	0	
27	18	11-Jun-2009	0859.871S	15739.526E	3	3	1635	1715	8	0	206	0	214	1	
29	19	12-Jun-2009	0754.740S	15748.345E	1	3	0854	0905	3	0	8	0	11	0	
32	20	12-Jun-2009	0733.996S	15714.405E	1	3	1404	1420	1	0	14	0	15	0	
33	21	12-Jun-2009	0733.672S	15709.765E	3	3	1450	1519	72	0	0	0	72	0	
34	22	13-Jun-2009	0723.996S	15636.640E	1	3	0617	0823	797	1	2434	0	3232	20	
35	23	13-Jun-2009	0720.839S	15626.573E	3	3	0935	1015	474	0	201	0	675	17	
36	24	13-Jun-2009	0720.383S	15620.719E	3	3	1055	1115	104	0	458	0	562	6	
37	25	13-Jun-2009	0720.186S	15613.384E	3	3	1220	1305	450	1	243	0	694	5	
CRUISE 6 TOTALS									4069	4	8873	0	12946	106	

APPENDIX 1

DAILY LOG EXTRACTS

June 4th

Cast off 0310 hrs bound for Small Malaita in good weather, the first for some time - a good omen. SIG observer Andrew Haiperi and culinary consultant James Wichman onboard; nearly all crew present on departure and all well; good passage through Sealark Channel and rounded Cape Zele'e 1345 hrs; anchored Fanalei 1600 hrs in 29m; good welcome from village, gradually being relocated to mainland; bait slow to gather.

June 5th

First net 0315 hrs - some current and only 1 bkt; second net on light boat 0410 hrs for 6 bkts; up anchor 0500hrs and head for 1000 Ships' Bay; beautiful weather but alas no bait; one marlin ~ 100kgs trolled 1230 hrs; tranquil for the rest of the day; anchored behind Kirighi Island, Thousand Ships Bay 2100 hrs.

June 6th

Bait gathered well after midnight - light boat went out~ 0130 hrs so delayed first haul until 0300 hrs; little cloud but ~ 220 bkts gold anchovy (with some punctifer) - 190 loaded; second net on light boat 0430 hrs for ~ 130 bkts, 110 loaded; up anchor 0500 hrs and head for Ndai FAD array approx 6 hrs away; plenty of troll activity at dawn, as rounding end of Ysabel, but only lost and/or macerated lures to show for it; sea oily calm with no wind at all; tried drifting FAD with radio buoy at 1150 hrs - just RR and mahi; in same area as DSI 5 but DS1 4,3, 2 and 1 all later found to be missing, so assume DSI 5 as well; checked Anderson Bank but nothing apart from beautiful visibility and pods of dolphins; a day striking for the total lack of any life seen all day - very disappointing when started with high hopes; opted to fish along western side of Ysabel fish tomorrow; considered too high risk to go all the way to OJ; will steam overnight and be off west Ysabel at dawn.

June 7th

Drifted from 0315 hrs 24 nm W of San Jorge near Global FAD, with intention of fishing along the FAD line towards Kolokofa, as done so successfully before; chummed first raft 0600 hrs but no fish - ditto with second; third however produced 1528 fish in a good steady bite - but just 35 YF; next FAD slightly more over a longer time (1.5 hrs) - 1545 fish, with 196 YF; nothing on next 3 FADs and one log checked, then 180 on the 8th - 18 YF, and 183 on the 9th, with 143 mostly small YF (78%) before bait ran out; a useful 3436 for the day - second highest daily total - and comparable to the total the last time this was tried (April 2008); first bonus for the month and the 200,000 mark for conv tags on Soltai vessels passed ... gentle steam into Kolokofa on a nother magic day - unfortunately logging vessel in the harbour but enough space and 105 and light boat anchored by 1900 hrs; bait quick to gather under very bright moon (suspect full moon actually tonight); first net 2100 hrs for 18 bkts; second on light boat zero catch; reset lighboat .. will haul 0300 hrs

June 8th

Third haul 0330 hrs for zero again - some signs on bottom but did not come up; light out on lightboat, so no final haul; steamed out at 0430 hrs; fished first FAD with good signs at 0700 hrs for 378 fish (73 YF) - enough to secure the second bonus; continued towards Patutiva, and Seghe for some much needed shopping; passed numerous FADs, all with fish and even the odd free school; alongside Seghe wharf 1245 hrs; good chance for some shopping, topping up water, swim in freshwater, and a bow vs stern soccer friendly; anchored 0550 hrs 29m in the usual spot off the village; moonrise 0630 hrs in a cloudless sky; first haul 0740 hrs for 12 bkts, much of it weak herring; second net on lightboat 2040 hrs for 7 bkts, mostly anchovy.

June 9th

Third haul 0310 hrs for 10 bkts, then final haul on lightboat 0415 hrs for zero; 29 total but maybe 9 already dead (Dussumieria); headed out 0500hrs with very modest expectations; first FAD not approached; second with better signs chummed but no bite; brief breath of southerly wind but soon died; 2 more not approached (no birds) and two more chummed with luck on the last (6th); 143 tagged (79 YF mostly small); one small wahoo poled, plus numerous mahi; headed for Patutiva 1120 hrs - Patson with dislocated shoulder from anchor incident and in some pain; one small blue marlin trolled 1215 hrs; off Seghe 1630 hrs; dropped Patson at clinic; drifted off village for shower/swim and washing then anchored Patutiva 1800 hrs; moonrise 1930 hrs with little cloud, then first haul 1940 hrs for 69 bkts of anchovy, Hq and rainbow sardines - good to see ! Second haul 2040 hrs on lightboat for 6 bkts.

June 10th

Grouped all lights at vessel for final haul 0200 hrs under bright moon - 26 bkts of mostly anchovy, for 101 total; up anchor and out 0300 hrs, heading for southern Slot, east of Gatokae; southerly wind early to 10 kts but died off; fished four FADs in good weather, all with fish and producing 1048 (575 YF), 375 (302 YF), 319 (26 YF) and 673 (341 YF), for a total of 2415 - 1244 YF (52%), mostly around 35cm but some around 45cm and up to 75cm; skipack mostly between 37 and 43 cm; finished by 1115 hrs and headed in - time for a "swim" and wash before baiting - has worked well in saving water; Patson in less pain with medication and has agreed to stay onboard until the return to Noro; one tazar trolled on the way in through the lagoon; anchored 1700 hrs and lights deployed; first haul 2030 hrs for 96 bkts, but with much weak herring; second haul 2130 hrs in light rain for 36 bkts - better quality after scooping out larger fish.

June 11th

Combined haul 0200 hrs for 76 bkts after predators (barracuda) scooped out; headed out 0300 hrs for south of Vangunu; first raft at 0630 hrs in fresh easterly wind and chop - mostly very small SJ so broke off; 7 tagged, 3 YF; better luck on second raft with 336 tagged (150 YF); just 11 on a drifting raft (2 YF) in worsening weather - ESE 15-20 kts; several blocks tossed on deck; no catch on 3rd raft, even though fish jumping all round boat; 36 on next (15 YF); weather moderated slightly then two good rafts to the west, south of Tetepare, for 333 (85 YF) and 292 (61 YF), with some good size SJ; just one tank of bait left (not full), but relentlessly kept fishing; headed belatedly for Patutiva; 63 on another raft on the way back (44 YF), then finished bait on raft with small fish near it but larger SJ in a free school nearby - 214 tagged (8 YF); daily total 1313 (380 YF); anchored 2045 hrs; first net 2230 hrs in rain for 36 bkts; second on lightboat 2340 hrs for 20 bkts.

June 12th

Final net 0315 hrs with all lights for 36 bkts of smaller baiting after removing many predators (cuda) ; headed out 0410 hrs for south Choiseul; god weather has resumed; first two FADs little fish (11 (3 YF) on second chummed; several others not checked - no birds; third chummed - small RR only; good log on current line at 1100 hrs but nothing; brief burst of 40cm plus SJ (with MT) - 15 only - then 72 mostly small YF in a large area of rippling fish but mostly small MT and RR; gave up at 1545 hrs and headed into Posarae; 98 fish for the day, enough to secure the 6th bonus; anchored 1700 hrs in 40m off Posarae (no baiting at SDA Ropa on sabbath); will do quick hauls (2) then head for other side of Vella Lavella overnight (NFD vessels fishing the Simbo-Rendova FADs); first haul 2030hrs after bait gathered quickly - 176 bkts loaded, almost pure anchovy, with ~ 30 bkts let go; second net on light boat 2140 hrs for 100 bkts loaded (sprat, anchovy), with ~ same amount let go; up anchor 2220 hrs and headed for first FAD 10nm north of Vella Lavella.

June 13th

Drifting near first FAD from 0250 hrs with fish signs; fish breezing around a wide area near the FAD; long bite began immediately, with 3232 fish tagged over a two hour period - 797 YF, one BE - ~ 1400 Z tags; next raft at 0930 hrs for 675 fish, with 474 YF and ~ 320 Z tags; third raft at

1100 hrs for 562 fish - 104 YF and ~ 500 Z tags (mostly small SJ) and fourth raft at 1220 hrs for 694 fish - 450 YF and ~ 530 Z tags (mostly small YF); 5163 for the day, a new record of sorts - slightly more than half of the releases Z tags, and 35% YF, so good result; opted to head in to Noro rather than bait and fish for a few hours in the morning, to the delight of all and sundry; steamed back in the continuing good weather and alongside at Soltai 2145 hrs. 12,946 fish tagged for the 10 day cruise, with 11 bonuses; WP2 wound up with 51,072. A good three months by any accounts and more than was dared hoped for.