

# PACIFIC TUNA TAGGING PROJECT PHASE 2

## CRUISE REPORT No. 1

24<sup>th</sup> June – 17<sup>th</sup> July 2008

### INTRODUCTION

This report summarizes activities of the first cruise of the Pacific Tuna Tagging Project (PTTP) Phase 2 during a 23 day charter period in mostly FSM waters, from departure from Noro on June 24<sup>th</sup> to docking in Pohnpei for the first full moon break in Pohnpei on Wednesday 17<sup>th</sup> July.

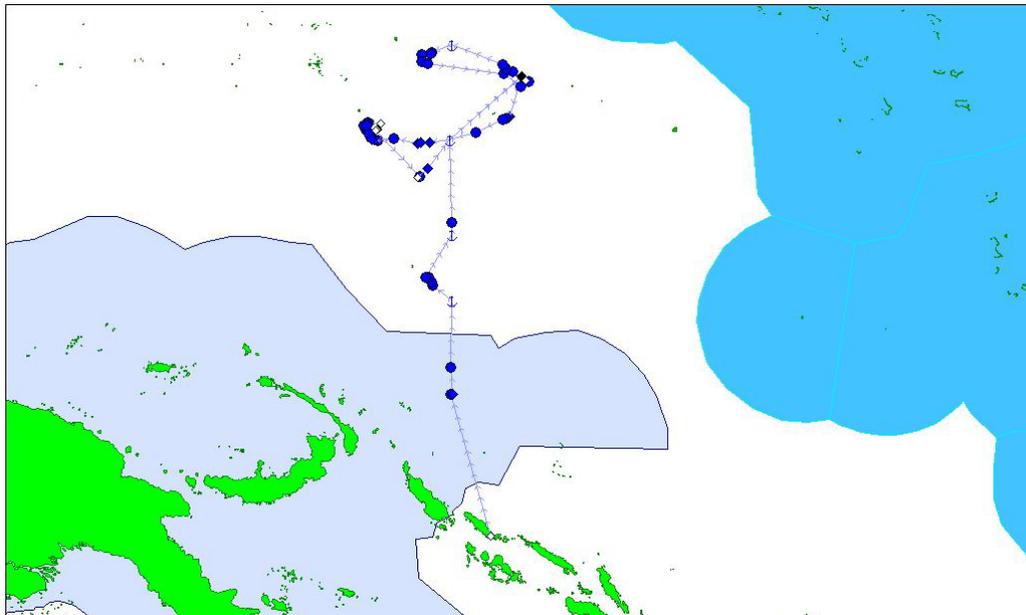
Fishing activity was initially carried out en route from Solomon Islands to Pohnpei, FSM, along the 156°E line, then using Pohnpei as a base for trips to areas in eastern FSM waters, including Mortlock (Nomoi) Islands, Nukuoro, Oroluk and nearby Ant and Pakin atolls

### GENERAL DESCRIPTION OF FISHING ACTIVITY

The vessel loaded with bait in Solomon Islands waters before transiting Papua New Guinea waters and steaming north along the 156°E line, where series of TAO oceanographic buoys was known to be deployed, stretching from 5°S to 8°N. Little success was enjoyed on the buoys at 5°S, whilst the one at 2°S was not located in fading light. Fish were however found aggregated with the buoys on the Equator and at 2°N, whilst an area of school fish was located near Kapingamarangi atoll. Fewer fish were found on several visits to the buoy at 5°N, then and also later in the cruise. The vessel arrived in Pohnpei after 5 days with little fuel, and was unable to obtain fuel for several days to enable fishing to continue. A circumnavigation of the island located few fish in the immediate of Pohnpei, so a visit to the Mortlock (Nomoi) Islands, to the south west was made after obtaining fuel and good bait in Pohnpei. Bait supplies in the Nomoi Islands were limited but moderate numbers of fish were tagged from free schools and several drifting FADs. Little bait was caught in Nukuoro, further south, before the vessel returned to Pohnpei via the 5°N buoy. A short trip was then made to the north-west of Pohnpei, to Oroluk atoll and the nearby 8°N buoy. Little fish was found on the buoy, but free schools of large skipjack were found and fished near Oroluk, before again returning to Pohnpei for the full moon break and the end of Cruise 1.

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**.

**Figure 1. Track during PTP Phase 2 Cruise 1, 24<sup>th</sup> June – 17<sup>th</sup> July 2008, showing the positions of schools fished**



**Table 1. Summary of cruise activity, with number of tagged fish released per day**

Dates	Activity	Tag releases
June 24 <sup>th</sup>	Charter commences; depart Noro for Posarae (Choiseul) baitground	
June 25 <sup>th</sup>	Heading towards FSM though PNG waters (crossed 1000 hrs); fishing TAO 5S	-
June 26 <sup>th</sup>	Fishing near TAO 2S – not located; crossed into FSM 2200 hrs	7
June 27 <sup>th</sup>	Fishing TAO Eq, then fish free schools towards Kapingamarangi	2045
June 28 <sup>th</sup>	Fishing TAO 2N and free schools	825
June 29 <sup>th</sup>	Fishing TAO 5N	194
June 30 <sup>th</sup>	In port Pohnpei; inwards clearance immigration and customs	-
July 1 <sup>st</sup>	In port; loading fuel offshore	-
July 2 <sup>nd</sup>	In port; baiting Langar Roads	-
July 3 <sup>rd</sup>	Fishing around Pohnpei; baiting Matalanim	0
July 4 <sup>th</sup>	In port fuelling; departed 1900 hrs for Mortlocks	-
July 5 <sup>th</sup>	Fishing seamount then towards TAO 5N	277
July 6 <sup>th</sup>	Fishing TAO 5N, then towards Mortlocks	444
July 7 <sup>th</sup>	Fishing AM then in Satawan lagoon; baiting Satawan	2
July 8 <sup>th</sup>	Fishing south of Satawan; baiting Ta/Satawan	56
July 9 <sup>th</sup>	Fishing west of Satawan; baiting Lukunor	262
July 10 <sup>th</sup>	Fishing west of Satawan; baiting Ta/Satawan	696
July 11 <sup>th</sup>	Fishing south towards Nukuoro; baiting Nukuoro	0
July 12 <sup>th</sup>	Fishing towards TAO 5N	477
July 13 <sup>th</sup>	Steaming towards Pohnpei; baiting Pohnpei Harbour	-
July 14 <sup>th</sup>	In port morning; fishing towards TAO 8N	107
July 15 <sup>th</sup>	Fishing TAO 8N then free schools around Oroluk	542
July 16 <sup>th</sup>	Fishing towards Pohnpei; in port late PM	0
July 17 <sup>th</sup>	Full moon break – end of Cruise 1	<b>6018</b>

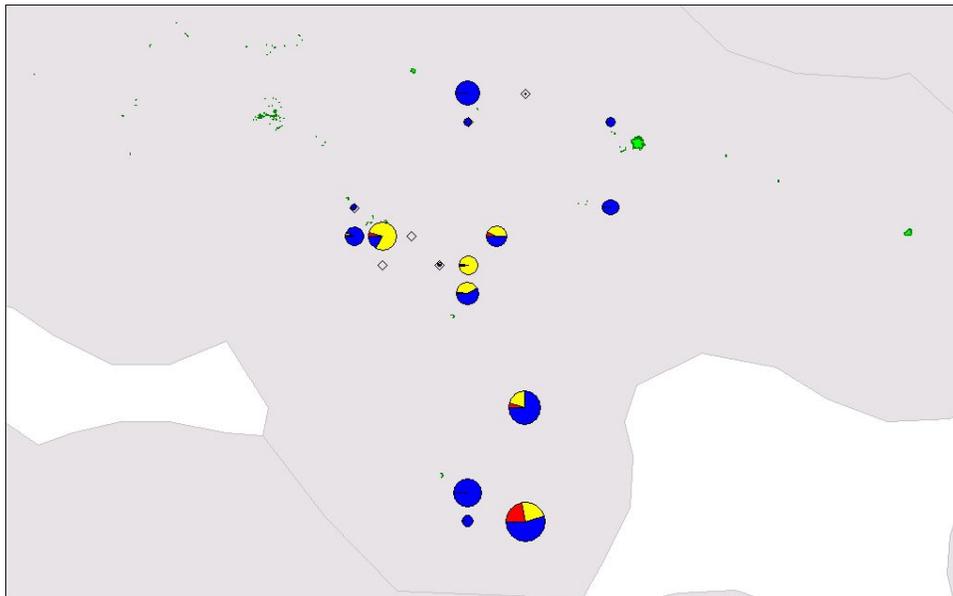
## TAG RELEASES

Of the 24 days of charter, one was spent on Solomon Islands waters, two in PNG waters and the remainder (21) in FSM waters. Of these 21 days, 14.5 days were spent fishing, one day steaming without bait, 4.5 days in port and one day on full moon break. Most fishing days were productive for tuna fishing, with 3 zero catch days and one day with less than 10 fish. In total, **6013** tuna were tagged with conventional tags, at an average of 414 fish per fishing day, and 5 archival tags deployed; on only one day were more than 1000 fish tagged and released (2045 fish on the first day in FSM waters), and on four days, over 500 fish were tagged and released.

Releases of conventional tags comprised 4,033 skipjack (67.1%), 1,614 yellowfin (26.8%) and 366 bigeye (6.1%). The “yellowfin plus bigeye” proportion of the catch, at 32.9%, was maintained as a result of most fishing occurring on associated schools, with free schools generally having less than 5% yellowfin. Yellowfin comprised over 50% of the catch on several days, when fishing drifting FADs and/or anchored buoys. Bigeye were taken in small numbers throughout the cruise, but 70% were taken on the first day in FSM waters around the anchored TAO Eq buoy

The Cruise 1 releases are summarized by school in **Table 3**, while **Figure 2** below shows the distribution of the releases in FSM waters by 0.5 degree square, by species.

**Figure 2. Distribution of releases in FSM waters by half degree square, by species, for PTTTP Phase 2 Cruise 1 (24/06 to 16/07/2008)**



Just over 30% of the Cruise 1 releases were from unassociated (free) schools, with skipjack comprising 99% of these releases; 38% of releases were from anchored FADs or buoys, with over 40% of those release numbers yellowfin or bigeye. The remainder of releases (32%) were from drifting FADs that were not uncommon in the area fished ie in the Equatorial Counter Current - nearly 60% of these dFAD releases were yellowfin.

With most releases from associated schools, typically with a high incidence of smaller fish, 35 % of releases of conventional tags were the smaller 11cm Z tags (2125), and 65% (3888) the 13cm P tags.

## ARCHIVAL TAG SUMMARY

During Cruise 1, just 5 medium-sized fish were tagged and released with MK 9 archival tags, comprising three bigeye (61-63 cm) and two yellowfin (68-7- cm).

## SIZE DISTRIBUTION OF TAGGED FISH

**Figure 3** shows the size distribution of fish tagged during the cruise leg. The skipjack size distribution on the cruise was particularly broad, with fish from 33cm (the nominal lower cut-off size) to over 70 cm. Free school fish were typically larger (50cm plus), whereas fish from associated schools (drifting FAD, anchored buoys) were often of mixed sizes. Most yellowfin tagged during the cruise were from associated schools, and of small size (30-35 cm) but with a significant tail of larger sized fish to over 70 cm nonetheless. The good number of bigeye taken (369) were mostly of two size ranges - 30-35cm, and 60-65cm.

## BAITING

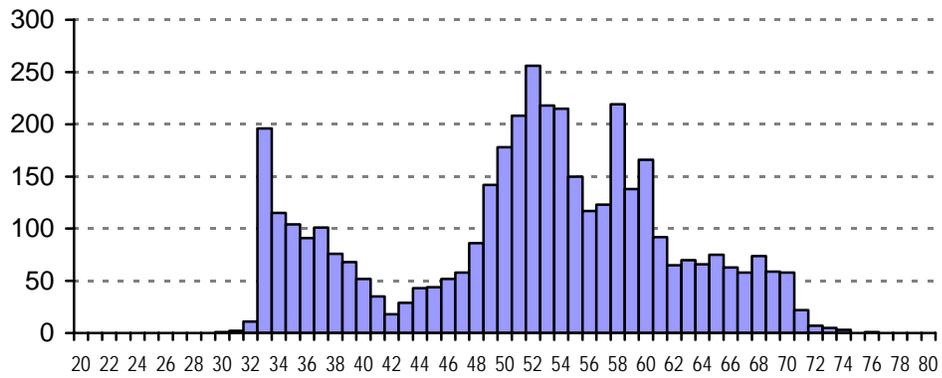
The vessel loaded up with full tanks of excellent anchovy (*heterolobus, devisi*) for the trip north from Solomon Islands. The bait survived very well indeed during the 1,100 nm trip, with less than 10% mortality in the first three days, and good survival for five days until used. Baiting in the deep lagoons of the high island of Pohnpei was generally good, in the Pohnpei outer harbour and at Matalanim, on the east coast, at least until the full moon period when it became difficult under unexpectedly clear skies. The deep lagoons of the Nomoi atolls (Satawan, Lukunor) and Nukuoro, further south, provided only small catches of blue sprats. In balance however, good value was obtained from the bait caught with 6,000 fish tagged during the cruise from just 1300 buckets of bait.

**Table 2. Summary of baitfishing activity during Cruise 17**

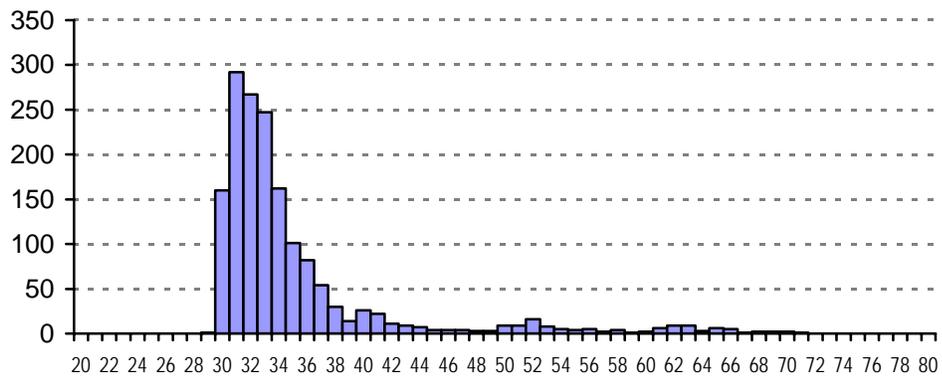
Date	Location	Catch (bkts loaded, hauls)	Species
June 24 <sup>th</sup>	Posarae	350 (2)	Anchovy (d,h), sprats (g,l)
July 2 <sup>nd</sup>	Langar Road, PN	177 (2)	Herrings, anchovy, cardinals, aigo
July 3 <sup>rd</sup>	Matalanim, PN	252 (2)	Anchovy (d,i), herrings (Hq)
July 7 <sup>th</sup>	Satawan	96 (4)	Blue sprat, sardines, atule, opelu
July 8 <sup>th</sup>	Satawan/Ta	35 (4)	Blue sprat, atule, opelu, sardines
July 9 <sup>th</sup>	Lukunor	77(4)	Blue sprat, atule, opelu
July 10 <sup>th</sup>	Satawan	17(2)	Blue sprat
July 11 <sup>th</sup>	Nukuoro	52(3)	Blue sprat
July 13 <sup>th</sup>	Pohnpei Hbr	350 (2)	Anchovy (d), Hq

**Figure 3. Size distribution of fish tagged during Cruise 1 (24/6 to 16/7/2008)**

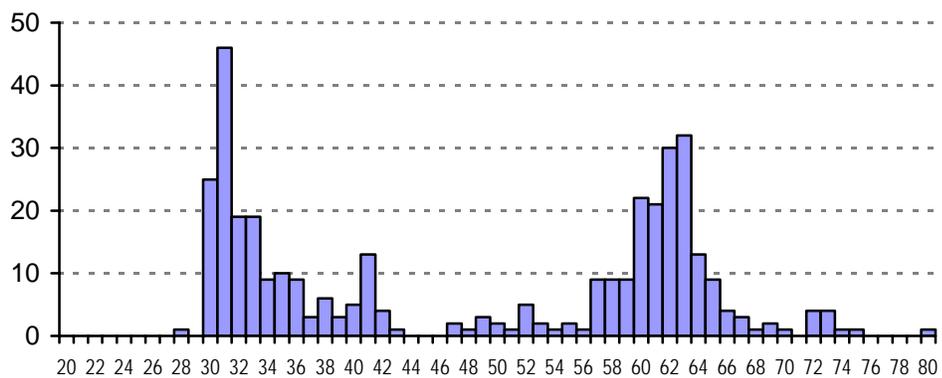
**SKIPJACK n = 4030**



**YELLOWFIN n = 1614**



**BIGEYE n = 369**



A compilation of the daily log extracts, detailing daily activities, is provided as **Appendix 1**.

## **ACHIEVEMENTS and PROBLEMS**

Cruise 1 has provided a solid start to Phase 2 activities of the PTPP, despite the challenges posed by an essentially new and untried crew on the chartered tagging vessel, and operations in a new area (FSM). The successful transport of bait during the long relocation journey to FSM, combined with finding good aggregations of fish around the succession of anchored TAO buoys got the cruise off to an excellent start. The number of fish tagged per cruise fishing day (400 plus) was acceptable at a time when little fishing activity reported in FSM waters. Access to real time oceanographic data for the first time was helpful in the absence of any fishery intelligence. A good proportion of yellowfin and bigeye releases in the catch (32%) was achieved, including a higher bigeye proportion (6%) than has been the case on previous cruises. Larger fish suitable for archival tagging were often caught but only 5 releases were managed, for various reasons.

The presence of long term fishing master Danny Puma'a made up for some general crew inexperience; the cruise also saw the successful debut for new tagger Hearty Matamaru and consolidation for Cynthia Wickham. Experienced FSM fisheries observer Paulino James made useful contributions to the work of the cruise.

Notable downsides during the cruise were the days lost due to the lack of fuel on arrival in Pohnpei, the difficulties of getting bait in the outlying atolls, and the generally greater distances between productive fishing areas than previously encountered.

**TABLE 3. Tag releases (all tags) by school during PTPP Phase 2 Cruise 1**

Event no	Tagged sch no.	Date	Lat	Lon	Sch type	Assoc.	Start	Stop	YFT	TAG TOTALS				TOTAL	SHK bite
										BET	SKJ	OTH			
2	1	26-Jun-2008	0255.400S	15602.385E	1	4	1050	1110	3	0	4	0	7	1 (PNG)	
4	2	27-Jun-2008	0000.805N	15602.082E	1	3	0635	0815	277	262	644	0	1183	32	
5	3	27-Jun-2008	0028.529N	15525.777E	2	1	1300	1310	0	0	156	0	156	1	
6	4	27-Jun-2008	0032.796N	15524.696E	2	1	1357	1420	0	0	504	0	504	0	
8	5	27-Jun-2008	0042.700N	15512.042E	2	1	1655	1705	0	0	202	0	202	1	
9	6	28-Jun-2008	0202.408N	15602.118E	3	3	0610	0735	182	35	531	0	748	6	
10	7	28-Jun-2008	0225.952N	15602.283E	2	1	0955	1003	0	0	77	0	77	1	
11	8	29-Jun-2008	0501.230N	15558.446E	1	3	0620	0735	36	7	151	0	194	1	
15	9	05-Jul-2008	0543.914N	15749.277E	2	4	1005	1030	0	0	277	0	277	8	
19	10	06-Jul-2008	0501.209N	15558.222E	1	3	0610	0655	93	16	14	0	123	1	
20	11	06-Jul-2008	0455.478N	15520.920E	1	4	1052	1136	283	4	5	0	292	2	
21	12	06-Jul-2008	0454.814N	15503.374E	1	4	1317	1325	7	0	4	0	11	0	
22	13	06-Jul-2008	0453.848N	15457.809E	1	4	1400	1415	8	1	7	0	16	0	
23	14	06-Jul-2008	0503.482N	15413.836E	3	1	1855	1901	0	0	2	0	2	0	
24	15	07-Jul-2008	0459.386N	15342.625E	2	1	0802	0808	0	0	2	0	2	0	
26	16	08-Jul-2008	0503.653N	15329.936E	3	1	0738	0800	0	0	56	0	56	8	
27	17	09-Jul-2008	0511.952N	15325.702E	2	1	0746	0805	15	4	29	0	48	1	
29	18	09-Jul-2008	0526.324N	15318.373E	2	1	1117	1128	0	0	176	0	176	6	
30	19	09-Jul-2008	0526.599N	15317.803E	2	1	1148	1153	0	0	38	0	38	1	
32	20	10-Jul-2008	0532.907N	15324.223E	4	1	0915	0935	0	0	50	0	50	1	
34	21	10-Jul-2008	0501.567N	15331.114E	1	4	1335	1445	503	28	115	0	646	10	
36	22	12-Jul-2008	0405.671N	15517.142E	1	4	1017	1105	177	7	246	0	430	5	
37	23	12-Jul-2008	0501.185N	15558.344E	1	3	1805	1835	29	2	16	0	47	0	
40	24	14-Jul-2008	0720.291N	15736.859E	4	1	1827	1840	0	0	107	0	107	4	
41	25	15-Jul-2008	0757.789N	15601.743E	1	3	0614	0635	3	3	0	0	6	0	
42	26	15-Jul-2008	0743.850N	15523.482E	4	1	1112	1130	0	0	237	0	237	0	
43	27	15-Jul-2008	0741.803N	15521.431E	4	1	1147	1158	0	0	173	0	173	3	
44	28	15-Jul-2008	0741.460N	15521.724E	4	1	1202	1220	0	0	126	0	126	0	
47	29	15-Jul-2008	0722.944N	15516.376E	2	1	1808	1820	0	0	84	0	84	1	
<b>CRUISE 1 TOTALS</b>									<b>1616</b>	<b>369</b>	<b>4033</b>	<b>0</b>	<b>6018</b>	<b>94</b>	

## APPENDIX 1

### DAILY LOG EXTRACTS

#### June 24<sup>th</sup>

Hectic morning of final preparations before departing Noro almost on schedule at 1015 hrs, after prayers onboard for vessel, crew and gear, farewells, some tears and good wishes; easy passage across the Slot, with calm seas, steady drizzle and abundant free schools just after Kolombangara; original plan to go to Suri aborted because of time (ETA after 2000 hrs) so headed for Posarae; all comms up and running; anchored 1600 hrs in 40m - some dirty water around after rain; dinghy sent to Ropa; crew meeting 1700 hrs then SPC meeting later; bait gathered quickly - first set 2100 hrs for ~ 300 bkts of mixed anchovies, sprats etc some of it small - 260 bkts loaded in reasonable shape; second set on light boat at Ropa 2240 hrs for ~ 150 bkts of mixed spp again, with 90 bkts loaded (350 total); up anchor 2340 hrs and headed for PNG via west coast Choiseul.

#### June 25<sup>th</sup>

Good run overnight with slightly following sea; 3 fish trolled early AM (tazar, mekoua, RR) in Choiseul shallows then a barracuda; began desultory searching at 0930 hrs but no signs; crossed into PNG waters 1015 hrs; bull mahi ~ 16 kgs or so trolled at noon; continued towards TAO 5S, east of main group of RD FADs; bait doing well; loading blocks and general preparations for tagging; 4 cradles, with Hearty under training; approached position of 7218 1730 hrs; missing but TAO 5S sighted soon after, 3.3 nm south of expected position; just on dark, so too late to chum, but no signs in any case apart from RR and triggerfish; tied to the buoy for an hour and tried jigging despite poor signs; one small YF dropped at boat; released line 2000 hrs and headed north overnight for TAO 2S - expected ETA 1400 hrs.

#### June 26<sup>th</sup>

Good passage overnight again, but with freshening E/NE wind; chummed first bird school 0920 - rose briefly but no bite; good looking bait; came across radio buoy with some cargo net still attached - mostly RR but chummed successfully, with first fish tagged on Phase 2 (4 SJ, 2 YF); fish down deep (80m plus) but did not come up at that hour (1100 hrs); nothing else until close to TAO 2S - birds 5 nm from buoy chummed but no response; reached buoy position 1545 hrs but not seen; chased some bird flocks without chumming then searched more intensively for buoy - not found by 1800 hrs - must have moved quite a bit; a disappointing end to the day, with just 6 fish tagged, and TAO 2S not found; headed for TAO 00 and should be there at 0600 hrs; bait mortality starting to increase, after 2 days ... chat with officers re teamwork and division of responsibilities after the afternoon shambles; THU showed crew tagging footage and (shudder) the SPC production, by way of training/orientation; steaming all night for TAO 00

#### June 27<sup>th</sup>

In vicinity of TAO 00 at 0630 hrs - sighted 2nm east of expected position; longliner several miles to NW; good bite initially of small fish then waves of increasingly larger fish, with a large breezer nearby; at least 4 passes, to end with 1183 fish (262 BE, 277 YF and 644 SJ) - all species with 3 or more size classes - BE from 30-80 cm, YF from 30-75cm and SJ 30-65cm; just under two bait tanks used - a good return; opted then to fish towards Kapingamarangi since would not get to TAO 2N before dark - some good free schools of large SJ with birds found and fished - 3 schools bit, producing over 800 fish, all SJ and mostly 55-65 cm; drew stumps at 1700 hrs and headed for TAO 2N; a very good day, with over 2000 tagged, with 270 BE and close to 30% BE and YF; augurs well for tomorrow and fishing the buoys generally - a real find. Weather excellent and bait has been a revelation - probably not much more than 10% after 3 days.

#### June 28<sup>th</sup>

On buoy at 0245 hrs - approx 2.3 nm NNE of expected position; some signs of fish - drifted until dawn; began chumming at first light - reasonable bite, with several breezers on surface. Mixed fish sizes again, but fewer larger BE and YF; not the same biting intensity as yesterday but 749 tagged (35 BE, 183 YF and 531 SJ) before disengaging and heading north; bird school (large SJ)

located at 1000 hrs for 77 tagged; with just one full bait tank left and expected to be finished, opted to head direct Pohnpei (300 nm) with possible late afternoon Sunday ETA; stood down from 1130 -1300 hrs (hot and still, no birds); no sightings after several hours search, so decided to head for TAO 5N; revised ETA now early AM Monday, as per original plan; steaming overnight. 826 for the day - the good start continues.

### **June 29<sup>th</sup>**

On TAO 5N at 0200 hrs, just 1.8 nm WNW of expected position; shut down and drifted until 0530 hrs, 3 nm from buoy; engine started but problem with power to flying bridge; rectified but not at buoy until 0620 hrs; small fish under buoy and larger fish (possibly BE) below, at 80m, but never really came up despite all the tricks; probably need to be throwing bait before daylight; 194 tagged (36 YF, 9 BE); several pilot whales (?) nearby at on stage; bait finished and headed for Pohnpei 0730 hrs; uneventful trip save for a large SJ (7 kg?) trolled early in the trip and one blue marlin (80 kgs ?) trolled late in the day - all good fun; passed Ngatik late afternoon en route Pohnpei offing to wait for pilot..

### **June 30<sup>th</sup>**

Drifting from 0200 hrs onwards; steamed towards pilot rdv at 0600 hrs, one mile of Jokaj Passage, on advice of agent; pilot onboard 0720 hrs and alongside wharf 0810 hrs; agent, SPC and Commission folks there; immigration and Customs procedures not all that smooth, with various docs missing, esp health certificate and valid deratisation cert; NORMA permit with agent; CL was able to certify crew and passengers as sound and safe; rat paper to come; water taken on; Ellie Sitan as head of Immigration team so all eventually well; cheques delivered and went to bank to get cash for crew etc with agent - soon became clear that two signatures were needed for cheques - two of ADL, DGI, BML and Amena; no budging on that without letter from Amena; Mere kindly gave 10K cash advance and able to set crew loose; Drew's truck delivered to wharf for use, then Manu delivered to hotel and lunch; became clear after lunch that no fuel available in Pohnpei from sole supplier Mobil, but price quoted as USD 6.28 per gallon; wheels began to turn in seeking alternatives eg buy fuel from seiners on port, or passing tankers - agent a great help; also delivered very supportive letter from Governor Ehsa of Pohnpei State; visit to Commission and in turn visit by Commission folk to vessels plus others (pilot, SPC etc ) seeking fish; very agreeable dinner with SK and Ziro Suzuki at China Star, then drop Manu off and horizontal.

### **July 1<sup>st</sup>**

Early start, with shopping/provisions; still no fuel news, though tanker expected Wednesday and fuel possibly available Thursday; received news that single signature for cheques OK (confirmed with Mereseini); obtained pilotage exemption (no paper needed - just advise movements in and out on VHF channel 16 to port control; obtained Pohnpei state bait approval (but no FROMAL permit) from Donald David but still should do courtesy contacts with chiefs/spokesmen; also appears the Oroluk is now a sanctuary; State boundary includes Minto and Nukuoro; no p/s fuel confirmed, so tried LuenThai (Chinese longline coy in old PFC area) who have access to tankers; Mr Gan Lin very helpful - will advise later; continued provisioning; discovered no shirts onboard - will need to have some couriered; returned to vessel 1430 hrs to find fuel from tanker had been confirmed with tanker steaming to RDV just outside 12nm; just in time to park car and head off at speed at 1500 hrs; arrived at tanker only to have them say not authorized by coy to give fuel; reluctantly headed back but then flurry of emails and calls had paid off, "miscommunication" corrected and headed back to tanker; only one fuel line on 105 so would have taken 7 hrs for 40KI - settled for just two hours transfer in sloppy seas (tanker with good para anchor) and 3,000 gallons (12 KI) duly transferred; finished 2215 hrs and headed for bait ground; difficult to reconcile chart with plotter (longitude error) so did not enter Ponape Pass and headed for Jokaj - safely inside on beacons but then similar problem; after many false starts, headed for main wharf.

### **July 2<sup>nd</sup>**

Tied up alongside main wharf 0100 hrs; provisioning began 0730 hrs, then initial trip to Palikir (NORMA, Natural Resources); Patricia as OIC; most apologetic for general lack of action; nothing

yet received from Chuuk, which needs follow-up; return to meet with Marion Henry at 1000 hrs - general advice to avoid Chuuk, even for fuel (reinforced later by Curtis); reef ownership issues in lagoon so complicated as to be not worth the trouble; good value to deal with Ruphik Micky, former Senator now acting CFO of Natural Resources, under Director Romeo; Hall Is and Namonuito OK, and Mortlocks fine if take Paulinho and visit villages/mayors before baiting; Oroluk looks to be off limits - sanctuary and disputed ownership (by Chuuk even if in Pohnpei waters) as well; tried to get cashier's cheque for 80K, but still issues at bank with signatures - will now accept one (ADL) as interim measure until Amena gets back; dropped samples to Manu at noon, with o'nite storage also arranged; crew shopping best at Ray and Dor's; mail checked at WCPFC (good set-up now); booked fuel for Friday AM with Mobil - now \$6.28 per gallon but may rise again; left car at CFC, fish for various (Herolyn, Curtis etc) then cast off at 1500 hrs; Paulinho didn't show but maybe the wrong day nominated; good passage to bait ground, then tortuous cautionary sounding out; finally anchored about 1645 hrs in 58m - all very deep and charts in fathoms; lights on before - one visit suggesting we were in sanctuary but not mentioned by Don David yesterday when carte blanche given - actual permit still not in hand; other passers by suggested not welcome but one accepted fish and said no problems; light boat also set closer to pass; first haul 2100 hrs (as SoO 3 started), with good showing early and deep; 72 bkts but much did not come up - Hq, cardinals, some devisi and very big Dussumieria; moved to lightboat 2200 hrs but anchor line too short and had dragged; returned to previous location 2215 hrs and set lights again.

### **July 3<sup>rd</sup>**

Second haul 0200 hrs at same location for 105 bkts, after better response to dimming; headed out 0300 hrs at reduced speed for north side of Pakin; drifting half-sunk Philippine-type drum FAD 0700 hrs but very little with it - no appendages left; large-medium marlin hooked 1000 hrs - luckily got off; another hooked 1300 hrs and landed; few scattered birds and some small YF schools but none chummed; apparently good school just before heading in for Matalanim turned out to be RR only; anchored in 45m well inside the anchorage 1700 hrs; light boat anchor out then anchored in 45m after some small incident; water quite dirty but bait quick to gather - first haul 2100 hrs for 70 bkts - Hq, devisi and some large Sardinella, with plenty of indicus; second set on lightboat 2215 hrs for a nice 182 bkts of mostly devisi but quite a bit of indicus, large and small; close to full tanks at 350 bkts with last night's left-overs; shut down and ready to go out at 0530 hrs.

### **July 4<sup>th</sup>**

Start main engine and up anchor 0530 hrs; some swell outside, heading for north-east point of island; some bubbles in two 1 tanks - rubbish in intake; cleared but some mortality in no. 1 tanks; nothing substantive sighted in two hours of searching - RR rippers, scattered birds; entered passage 0910 after plane landed, alongside 0940 hrs to take on fuel; crew paid another \$50 advance; shower annex cleaned up and will be renovated as wet weather gear storage area; bank cheque for 81,000 for fuel issued almost painlessly, but fuel not commenced until just after 1400 hrs; more shopping; observer (Paulinho James) embarked; more liaison with State Marine Resources and map of MPAs provided; meeting with Sec Ext Affairs (Lorin Robert) at 1430 hrs which lead to some good publicity initiatives with NORMA/Eugene; fuel loading finally completed just after 1900 hrs - 52KI loaded, making 62KI in all, the most ever loaded; cast off 1930 hrs and headed out through pass for 548m seamount south of Pohnpei; good conditions and making close to 10 kts

### **July 5<sup>th</sup>**

Arrived in vicinity of seamount 0330 hrs and drifted until 0600 hrs; searched area until 0715 hrs, including new position taken from chart (first from Noe) - no sign, so headed SW towards TAO 5N, 145nm distant; will search en route; first school fished around 1000 hrs, near p/s floats and net so assume associated; ~ 280 fish tagged, all SJ; two other fast-moving schools with terns not caught; a long afternoon with no sightings; good marlin lost at boat (wireman let go and prop did the rest); final schools seen 1815 hrs (two within a nm of each other); one with jumpers

chummed - came up way back in wake but did not come closer, then ran out of time and light; steaming for TAO 5N - should be there about midnight. 277 for the day - better than nothing, like the past four days ...

### **July 6<sup>th</sup>**

Tied off long to buoy at midnight - good signs at 60m and below; fishing (jigs) however slow - several lures lost to silky sharks; 3 BE and 2 YF tagged, with several rejects; one recapture (YF, 34cm) from previous visit on June 29th; let go rope 0545 hrs and chumming before 0600 hrs; slow biting with many small RR; good signs down at 50-60m but never rose to the surface; brief bite of larger YF (~ 70cm) - one AT; total 123, including 5 jigged fish - 93 YF, 16 BE, 14 SJ; searching towards Mendelejev Seamount - encountered three drifting FADs along the way - first at 1100 hrs (Filipino drum type) produced 292 fish, mostly small YF but some larger ones and few BE - 283 YF, 4 BE; second with radio buoy but old - stopped fishing since mostly undersized fish and RR - 11 tagged; third a larger bamboo type - same situation as previous - stopped fishing - just 15 tagged; nothing around Mendelejev Seamount so continued towards Satawan with one tank of bait left; just on dusk, found area of breezers - bit readily but mostly too small (SJ 30-31 cm) and stopped fishing; all over for the day at 1910 hrs - nice sunset as heading for Satawan and Sols Independence Day tomorrow - 444 for the day, mostly small YF, so maintaining some kind of momentum ... will drift tonight close to Satawan.

### **July 7<sup>th</sup>**

Drifting from 2230 hrs the night before, about 12 nm off Satawan; fish under the boat when awoke, but first a moving ceremony for Solomons Independence Day - prayer, flag-raising and beautiful singing of national anthem; fish by then had dispersed but no matter - well worth the respect paid; searching from 0630 hrs onwards with some bait left; two adjacent schools 0800 hrs but small SJ 30-31cm and just a few tagged before breaking off; steamed in to Satawan south pass - good passage, and anchored 1230 hrs; quickly visited by A/Mayor, fish distributed and all very welcoming; trips ashore for most crew, almost homecoming for Paulinho, finding lost relatives, talking story etc; all onboard at 1700 hrs and vessel relocated for baiting, about 5 nm from pass; images of amazing huge old breadfruit tress, two resolute churches, Japanese tanks and bunkers, tranquility etc; nice breadfruit dishes given and excellent Independence special menu onboard, before laying a carton on for the crew, as flag lowered and the sun sank in the west; more breadfruit dishes (kon and others) just kept arriving as the cold Budweiser slid down the parched throats - all great stuff; a modest 2 fish for the day, but a good Independence day and we will move on with renewed purpose !! Bait gradually gathered, with canoes hovering nearby to catch sardines etc around lights - first net 2200 hrs for 48 bkts of blue sprats and some large sardines; second at light boat for just 11 bkts; light boat reset and vessel relocated, as planning four shots

### **July 8<sup>th</sup>**

Third set 0320 hrs in gentle rain; probably 100 kgs of large sardines, atule and some opelu scooped out for canoes; 21 bkts of battered sprats with some larger fish loaded; fourth set on lightboat 0410 hrs for 16 bkts, plus maybe 50 kgs of sardines etc scooped out; a meagre 95 bkts for the night, including much sardine - disappointing; out through passage at 0530 hrs, heading south; very large area of breezers with birds 0730 hrs but did not bite well - feeding on p/l anchovy; 56 good size SJ tagged; after that, various bird flocks but usually sat down on approach; nothing sighted all afternoon between squalls - in passage and anchored closer to pass than last night (off Ta island) in 46m at 1730 hrs after setting light boat; just 56 for the day - need to get good bait to head south to TAO 2N and maybe Kapinga environs. First haul 2230 hrs - good sprat shapes around the light (> 100 bkts) but did not move across to net; about 5 bkts but not loaded since full of alima-like spiny critters; light boat haul 2330 hrs for just 11 bkts of large bait; moved back to Satawan for later shots;

### **July 9<sup>th</sup>**

Third haul 0400 hrs off Satawan - 15 bkts of large bait loaded; final haul on light boat 0500 hrs, with some good sprats, for 9 bkts; outside lagoon by 0620 hrs, and heading west around southern Nomoi; first lazy school, in oily conditions, at 0745 hrs, for 48 fish, including 4 BE and 15 YF, mostly small, but SJ larger; an area of (again) lazy fish of western end of Satawan, with 176 and 38 tagged from adjacent patches, all good size SJ, and biting well, briefly, on the very large bait left; bait finished but more schools seen on the way in to Lukunor; anchored 1620 hrs in 33m to another good reception - more breadfruit pudding, coconuts, limes etc. 262 for the day, a good improvement which lifted us over the 4000 mark (4112) - hoping for good bait tonight; first haul 2230 hrs, with some sprats around light; slower transition, light shallower and less dimming saw good transfer and 30 bkts loaded plus 30kgs large bait scooped out; second net 2330 hrs with poor signs and just 2 bkts loaded;

### **July 10<sup>th</sup>**

3rd set on vessel at 0400 hrs, with better signs, for 34 bkts; last haul on light boat 0440 hrs for 13 bkts, 77 in total; baiting system worked much better, just not enough bait - but we got what was there; next refinement will be to motor light boat to 105 before each shot, since not attracting all that much and will stick with light if towed slowly - saves a lot of messing around with re-anchoring etc; agonized over whether to use bait or store for trip south - opted for compromise - use one tank, keep one, and hope for good bait tonight; steamed out in daylight (0630 hrs) and searched to west where fish seen yesterday; first school 0915 hrs - not too interested but managed 50 fish, all SJ, and majority at stern; another flighty school chased but to no avail; found a Phils drifting FAD (just cylinder and ropes, no appendages) at 1330 hrs - nothing at surface but redspot down deep (50-80m) - chummed and circled until finally came up, then kept biting for an hour before allotted bait finished, then broke off and headed for Satawan south pass; dropped light boat then anchored off Ta in 34m at 1715 hrs; bait (sprats) quick to gather around light - will try bringing light boat to 105 tonight; first haul 2130 hrs for 11 bkts - fewer sprats .. just not many around; moved anchorage further towards Satawan village.

### **July 11<sup>th</sup>**

Second haul 0200 hrs for 6 bkts, total just 17 for the night; out through passage 0330 hrs bound for Nukuoro with moderate seas inshore (swell from south east) but then eased off; nothing sighted all morning; contact made with Nukuoro mayor by radio and baiting welcomed; several small schools seen off NE corner of Nukuoro, second one YF; rose briefly in wake but no chocolates; approached passage a bit late, at 1720 hrs - escorted in by kindly villagers - narrow and a tad heart-stopping - round of applause when we got through; advised that major needed toksave before we could anchor, so complied; 105 searching for suitable anchorage - not easy as lagoon is like donut, with rim of < 20m beset with patches, then in the middle 50 fm and more; the one good area found had pearl culture lines through it; eventually anchored in 83m, with light boat inshore to bring bait back; bait quick to gather at surface under bright moon and clear sky, and big trace at 40m (midwater) - first net 2200 hrs, after dinghy gently motored back; mayor onboard for the shot; bait seemed not to transfer to stern - catch just 5 bkts after looking good - layer down at 40m not caught, despite rising well initially; reset lights in same location and re-deployed dinghy for second shot;

### **July 12<sup>th</sup>**

Second net 0200 hrs for 11 bkts; third net 0445 hrs - 36 bkts, for 52 total for the night - a good one by current standards; waited for good light, started engine 0715 hrs then out through pass without incident; sighted dFAD with radio buoy 1000 hrs - good trace underneath, but only small fish came up; fished for an hour and used one tank, to tag and release 430 fish (177 YF, 7 BE); Paulinho in action for the first time and a steep learning curve it was; stood spymasters down for 2 hrs and resumed at 1400 hrs; speed had been increased mid-morning to be able to make TAO 5N before dark; arrived just in time, at 1805 hrs - few signs, but one good concentration briefly from 50m to surface; small breezer at surface but just not biting; ~ 50 fish tagged, mostly small, with more tagged at stern; finished and headed for Pohnpei, with about 3 bkts left plus bigger fish.

### **July 13<sup>th</sup>**

Wind freshened from east overnight but still only slight seas with low swell; predictable rain when in sight of Pohnpei but seemed to bring on a marlin - blue of 80 kgs boated and soon after rigor mortis attained, cut up for BBQ and storage; when inside, dinghy launched, Paulinho off home for the evening and Maxwell Filei to hospital with Thomas (gastric disorder); anchored for baiting 1500 hrs, just west of Sokehs point in 42m - only one carrier in port; the first of the traditional Sunday BBQs on an idyllic afternoon; bait quick to gather under full cloud; haul delayed because of wind (E 101-5 kts)

### **July 14<sup>th</sup>**

First haul 0045 hrs after wind abated slightly; nice catch (175 bkts) of good anchovy (devisi); second haul on lightboat 0200 hrs for another 175 bkts and full tanks of mostly large devisi; rested until 0700 hrs then moved to inner harbour to berth and provision; will defer taking fuel until the break; cast off 1400 hrs and headed out - seas slight- moderate on sb quarter; birds successfully chummed near Pakin but MT only; continued NW towards TAO 8N; bait holding well; fast moving school 1730 hrs but not caught; school just before dark which came up well and 107 good size SJ tagged; that was if for the short fishing day; making good speed with sloppy following sea so should arrive 0430 hrs.

### **July 15<sup>th</sup>**

Reached buoy 0430 hrs and drifted until 0600 hrs; few signs of fish then hit with squall and driving rain; sprays not reaching sea surface so abandoned buoy and headed for Oroluk; 3YF, 3 BE tagged; weather gradually taking up during the morning but no searching/fishing for several hours; good area of big SJ north of Oroluk around 1100 hrs - 536 SJ (avge size 68cm and up to 76cm) tagged; a few schools of mostly YF on southern side did not respond, but then the traditional sunset school produced 84 SJ at 1800 hrs; 626 for the day (620 SJ) and over 6000 for the cruise (6018); steaming over night initially in good weather but squalls and heavy chop around midnight.

### **July 16<sup>th</sup>**

Into easterly chop from midnight onwards - not a gentle night's rest; will try to use remaining bait (80 bkts ?) on the way in; seas moderate, searching difficult, nothing seen; alongside CFC wharf at 1430 hrs; rental car and wcfpc vehicle waiting; full moon break commences; evening at Village with WCPFC and Oz HC.

### **July 17<sup>th</sup>**

Most of crew on round island trip; shopping as always and catching up on a month's correspondence; guests (Drew Wright, Ziro Suzuki, Ken Smithson) arrived 1700 hrs and cast off 1710 hrs for bait ground; some officers and crew in very dubious condition and lucky to be allowed onboard; first haul after reasonable signs 0915 hrs for 23 bkts, mostly anchovy; second on light boat at 2200 hrs for 5 bkts; left light boat there (too close to carrier and FV Raffaello) and re-anchored; not much cloud and hard work under the full moon.