

Fork length

Newsletter

The Observer and Port Sampler Newsletter
for the Tuna Fisheries of the Western and Central Pacific Ocean — Issue #5 — October 2003

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(This edition is also available on the Oceanic Fisheries Programme website at: <http://www.spc.int/OceanFish/Docs/Statistics/index.asp>).
Printed with financial assistance from the Global Environment Facility and the European Union.

One year later, and it looks as if Fork Length has found its rhythm. Publishing Fork Length just after the Standing Committee on Tuna and Billfish meeting (SCTB) seems a sensible choice. This yearly meeting of tuna and billfish scientists reviews the work that has been done to-date, and sets the tasks for the year ahead. More importantly for us, it highlights new information that is available on tuna fisheries. Fork Length's main aim is to keep observers up-to-date with current information on the fishery they monitor. This edition not only documents the latest catch statistics, but also continues our focus on bycatch. We are pleased to be able to publish an article by FSM's National Observer Coordinator, Steve Retalmai, on the work they have been doing to effectively manage turtle interactions. Another interaction that is affecting many longline vessels is interactions with whales. Inside we take a look at the problem and the species of whales involved.

There has been a lot of activity in the National Observer Programmes since we last wrote, and many new faces to introduce. Kiribati has a new National Observer Coordinator, Tekirua Riinga (see photo page 6). The position is funded by SPC. Tekirua, a graduate from James Cook University in Australia, was invited to complement these qualifications with some basic observer training in the Cook Islands.



**Marshall Islands' new National
Observer Coordinator,
Manasseh Avicks**



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Observer monitoring in the Micronesian area has been additionally strengthened, with the arrival of Manasseh Avicks to the Marshalls Islands to act as their new National Observer Coordinator. The position has been jointly funded by MIMRA and SPC. Manasseh, one of the best purse-seine observers in the region, is well known to USMLT observers after providing back-up support to that observer programme for a number of years. He also served as an SPC observer during 2000. We hope he will be effective in transferring his skills to the team in the Marshall Islands.

For the first time we have contributions to the newsletter from nearly all the National Observer Coordinators, updating us on how each of their programmes is doing. It's a feature we hope to expand on in the future. Please remember that

contributions from observers are always welcome. Also for the first time, this edition of Fork Length will be translated into French for the small but growing number of French speaking observers and port samplers that have joined in the last couple of years.

Finally the team here at SPC — Deirdre, Peter and Sifa — would like to thank everyone for all the hard work they have put in over the last year. We look forward to overcoming all the challenges with you in the coming year.

Deirdre Brogan
Fishery Monitoring Supervisor
(Deirdreb@spc.int)



Port sampling

Summary of data collected by port samplers in the region during 2001, including number (range) of vessels sampled and number of fish measured

Country	Port	Gear	Size Sampling							
			Vessels	SKJ	YFT	BET	ALB	OTH	TOT	
AMERICAN SAMOA	PAGO PAGO	LL	124	645	368	93	34,364	367	35,837	
FSM	CHUUK	LL	21	0	792	1,057	70	61	1,980	
		PS	0	0	0	0	0	0	0	
	GUAM	LL	8	0	968	693	13	34	1,708	
		KOSRAE	LL	16	0	3,982	1,974	0	23	5,979
	POHNPEI	PS	9	646	245	9	0	0	900	
		LL	56	0	9,783	8,251	102	412	18,548	
	YAP	PS	53	9,924	331	18	0	8	10,281	
		LL	4	0	10	12	0	0	22	
	FSM Total				10,570	16,111	12,014	185	538	39,418
	FIJI ISLANDS	LEVUKA	LL	47	0	1,633	940	7,323	0	9,896
PS			3	1,953	682	226	0	0	2,861	
SUVA		LL	60	45	6,687	3,544	3,382	505	14,163	
		Fiji Total			1,998	9,002	4,710	10,705	505	26,920
MARSHALL ISLANDS	MAJURO	LL	4	0	42	109	1	0	152	
		PS	87	151,832	39,306	6,021	0	193	197,352	
NEW CALEDONIA	KOUMAC	LL	6	0	2,049	488	10,149	1,972	14,658	
	NOUMEA	LL	15	0	12,403	2,693	30,167	9,540	54,803	
	New Caledonia Total			0	14,452	3,181	40,316	11,512	69,461	
PALAU	KOROR	LL	106	0	35,104	18,525	17	4,307	57,953	
PNG	AT SEA	PS	11	2,168	1,499	325	0	8	4,000	
	KAVIENG	PS	5	2,381	1,446	340	0	44	4,211	
	MOTUKEA	LL	7	3	883	190	188	39	1,303	
	PORT MORESBY	LL	13	0	2,006	360	117	43	2,526	
	RABAU	PS	3	557	547	96	0	0	1,200	
	WEWAK	PS	2	296	290	13	0	1	600	
	PNG Total			5,405	6,671	1,324	305	135	13,840	
SAMOA	APIA	LL	150	1,527	1,982	849	33,463	4,451	42,272	
	ASUA	LL	2	1	0	0	14	14	29	
	SALAILUA	LL	6	1	1	0	79	20	101	
Samoa Total			1,529	1,983	849	33,556	4,485	42,402		
TONGA	NUKU'ALOFA	LL	14	77	1,394	749	2,659	734	5,613	
TOTAL				172,056	124,433	47,575	122,108	22,776	488,948	

Port sampling assessment in Pago Pago

Congratulations to the two American Samoan port samplers, Paulo Matautia and Taua Tuumalo, who successfully passed an independent assessment of their juvenile tuna identification skills. David Itano, from the Pelagic Fisheries Research Programme, University of Hawaii, evaluated their work. David is well known in the region for his expertise when it comes to identifying juvenile tuna. He has also helped to share this knowledge, publishing articles like "Are You Sure That Fish is a Yellowfin?" as early as 1992.

David judged the American Samoa samplers' identification skills to be 100% accurate. The port samplers had their work checked under different working conditions (on the wet deck and port side). Each sampler measured and assigned a species code to nearly 400 fish before handing the fish on for verification. The average size of the tuna sampled was 55 cm. It was noted that the main characteristics used by each sampler to establish the identification of the fish were different, but both used a mix of the identification

features highlighted in observer and port sampler training — that is the overall body shape, the pectoral fin length and shape, and the body markings.

Independent verification of port samplers' work is beneficial to all parties. The port samplers are given a chance to show that they have the skills and experience to complete their assigned tasks competently, and can proudly stand by their work if it is ever questioned. If their sampling skills are seen to be weak, port samplers can benefit from immediate on-site training. Scientists, meanwhile, can use the verified data with increased confidence. The report recommended, and SPC agrees, that independent assessments of all port samplers' work, both longline and purse seine, should be carried out on a regular basis. Gordon Yamasaki, NMFS' (National Marine Fisheries Service) on-site Tuna Biologist, was thanked for organising this important work and for the continued support and overall direction he gives to the port sampling programme in Pago Pago.



Josiane Teimbaonou samples tuna unloadings at Koumac, New Caledonia

Standing Committee on Tuna and Billfish

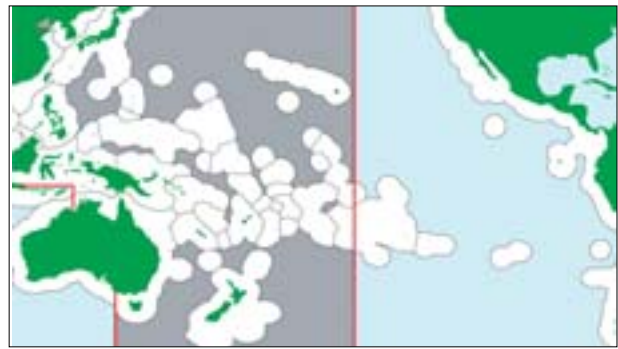
The "Overview of the Western and Central Pacific Ocean tuna fisheries, 2002" presented by Peter Williams at this year's SCTB summarised the provisional catch estimates for the tuna

fleets working in the Western and Central Pacific (WCPO). The report is an interesting read for observers as it shows how well the fishing vessels are doing as a whole. It's nice to know what the

actual catch figures are, so you can discount wild tales from fishermen who tell you there are no more fish in the sea. The paper noted that the total WCPO catch of tunas during 2002 was estimated at 1,982,001 metric tonnes¹, the second highest annual catch recorded after 1998 (2,037,644 t). This WCPO tuna catch represents 75% of the total estimated Pacific Ocean catch (2,656,773 t) in 2002 and 50% of the provisional estimate of world's catch (3,965,346 t). The global catch of the four main species for 2002 was the highest ever.

The provisional purse-seine catch was the second highest on record. This may have been due to the relaxation of the restrictions on the purse-seine fleet that had been in place voluntarily during the previous two years. El Niño conditions during 2002 encouraged many vessels to fish more easterly than usual. The observers and port samplers from the Marshall Islands and Kiribati would have seen an increase in their workload last year.

It was a very good year for longliners, who recorded their highest catch level ever, although this was only 500 mt higher than the previous



Western and Central Pacific Ocean

highest level 2001 (221,248 t). The pole-and-line fishery catches were slightly higher than the 2001 levels. The local Solomon Island's fleet was noted to have recovered from the low catches in 2000. However, it was still operating at less than half of its previous levels (over 20,000 t annually in the 1990s.)

Further details can be found at:

<http://www.spc.int/OceanFish/Html/SCTB/index.htm>

Turtle Interactions in FSM



The National Ocean Resources Management Authority (NORMA) in FSM has been concerned with bycatch issues for some time, and recognises the increasing challenges they present to fishery managers dealing with commercial tuna fishing operations. One bycatch issue that has been highlighted in the region is that of adverse interactions between longline fishing and several species of sea turtles, populations of which are considered endangered or threatened in many locations throughout the world.

In 2001, NORMA submitted a proposal to NMFS for funding to address the issue of sea turtle interactions with longline fisheries in FSM. The proposal identified the education of NORMA staff and the fishing industry as the first steps to heighten overall awareness of the subject. The idea of focusing on education was mainly to get the subject "out in the open", to encourage more and better data collection, and to possibly

set the stage for future activities. The FSM observers were identified as playing a key role in this undertaking.

The project has three major goals:

1. To expand the activities of the FSM fisheries observer programme by improving the capabilities of both local staff and observers to recognise, handle, and report interactions between sea turtles and commercial tuna fisheries;
2. To familiarise commercial fishing operations in FSM with techniques of handling sea turtles and to provide appropriate instructions on how to address specific sea turtle interaction situations;
3. To integrate the topic of sea turtle interactions into NORMA's ongoing management programme.

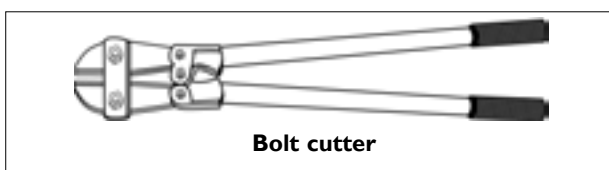
*by Steve Retalmai
(with thanks to Mike McCoy)*

¹ All quoted figures are provisional estimates only.

The three-month project finally began in February 2003 with the arrival in Pohnpei of our consultant, Mike McCoy. Mike has been active in many aspects of tuna fisheries management, and has been involved in various aspects of sea turtle research in FSM since the early 1970s. He was also the first Executive Director of NORMA (then the Micronesian Maritime Authority) and started the Authority's observer programme with just two observers in 1980. The NORMA National Observer Coordinator, Steve Retalmai, served as his counterpart during the current project.

To reach our first goal, we held training workshops with NORMA fisheries observers in Pohnpei and Chuuk. The port samplers were also invited. A video from NMFS showed how to release hooked sea turtles, and how to resuscitate comatose turtles. There was also a PowerPoint presentation with specific information on the biology and life history of the various species of sea turtles found in FSM's EEZ.

The observers were shown the new equipment they will now take on all longline trips: large dip nets to bring smaller turtles on board and bolt cutters to remove externally attached hooks. In addition, observers were given a turtle-tagging tool to tag healthy turtles if returned to the sea and disposable cameras to record sea turtle interactions. All of these materials were provided by the NMFS-funded project. The observers were shown how to properly tag the turtles, and to fill in the new Gen-2 form which records information on all species of special interest.



Bolt cutter

For our second goal, we targeted the longline vessel operators in Pohnpei, Yap and Guam. In addition to showing the NMFS video and handing out and explaining the turtle release instructions, printed in appropriate languages, we explained that observers on longline vessels will now take some additional equipment (dip net, bolt cutters, tag applicators) to carry out their tasks, and asked for the cooperation of the operators and captains.

The meetings with the industry were important because this will be the first time that onboard observers will be expected to actually direct the vessel crew on specific actions to take. We wanted to make sure that everyone understands how important this is. The approach we used was to

explain that their licence already requires them to "release turtles and miscellaneous bycatch with the maximum chance of survival" and our observers are merely demonstrating the best methods to do this.

We also presented the project to the various government fisheries departments in the FSM states. In FSM, the four states are responsible for conservation and management inside the 12-mile territorial sea, while we at NORMA are responsible for the 12 to 200 mile EEZ. Showing the video and giving the presentation was a good way to discuss the status of turtle conservation at the state level, and to give the state officials and employees some information on sea turtle biology and life history.

It was necessary to have discussions with people at the state level to explain that there is not much data on the subject of turtle interaction with longline, from FSM. At this stage we don't want people to think that commercial fishing is the main or only problem facing sea turtle conservation. We thus made it a point to discuss other important factors that can cause population decline in sea turtles, including: poaching, capturing female turtles before they had a chance to nest throughout the season, digging up of eggs, loss of habitat through dredging and landfill, and so forth.

One of the things that contributed to the success of our project was that NMFS and SPC had recently collaborated on the production of printed turtle release guidelines. We had those translated into several languages for distribution to the longline operators, agents, and captains. We also prepared a zipper binder for each observer to take on longline trips. The binders include waterproof laminated sheets for sea turtle species identification, copies of the turtle release instructions (English, Japanese, Chinese and Taiwanese), turtle-tagging pliers, and some numbered turtle tags obtained from NMFS in Honolulu. The Honolulu NMFS observer programme was very helpful in giving us some of the relevant materials that they had already produced and in providing some good tips, like including a small spray can of WD-40 in the observer equipment so observers can properly maintain the tag applicators and bolt cutters while at sea.



WD-40

A copy of the training syllabus was also included in the zipper binder given to the observers. This document has many illustrations showing turtle migrations in the FSM area based on previous tag returns, the nesting sites for some turtles in the Western Pacific, and a summary of biological and life history facts about sea turtles. The intention is for the observers to have this information available to them to share with longline crews. It is also a good reference document to have.

Our third goal is perhaps the most important. In the past there have been projects where turtles were tagged by FSM observers and information collected. We have photos of these observer activities from more than 10 years ago, but these activities were not consistently maintained or continued. This time we think that having the information and tools to train observers properly and to educate them in turtle biology and life history will help in keeping this part of our work going. This project was only a start, however, and it will be up to the observers to put what they have learned into practice.

Update September 2003: Three more observers who were at sea during the initial training were trained and given copies of the training syllabus,



Leatherback turtle coming onboard a longliner, photographed by an FSM observer

five Inconel tags and other tagging equipment. Of the 13 observer trips taken since March with trained taggers onboard, only one turtle interaction was reported. A green turtle was tagged by the Chief Observer Paulino James while onboard a Japanese purse seiner. The turtle was 31 cm SCL (straight carapace length) and was tagged on the right front flipper with tag number RFF-I-127 and on the left front flipper with LFF-I-128.

New recruits

by Siosifa Fukofuka

Cook Islands: 3 - 21 Feb 2003

To publicise the observer training course, an advertisement was placed in the local newspaper (*CI News*). The Ministry of Marine Resources (MMR) subsequently selected 10 participants to attend. Of these, one person came from the outer islands (Mitiaro), while four were from the main island of Rarotonga. There were also four staff members from MMR along with Kiribati's new Observer Coordinator Tekirua Riinga who

came along for specific training in observer duties. Among the trainees were two females, one a MMR staff member, the second a Waikato University student who went on to top the class.

Participants at the Cook Islands Observer Training Course.
Front row: Lorena Maru, Pamela Maru, Jason Marurai
Standing: Karl Staisch (FFA), Tekirua Riinga, Paka Pokino, Atingakau Tangatakino, Bill T Marsters, Siosifa Fukofuka (SPC)



Regional Observer Course: 14 April - May 3 2003

The Regional Observer Training Course is organised by the FFA Observer Programme Manager, Karl Staisch, every two years and funded by the US Treaty. The aim of the workshop is to bring together selected participants from FFA and SPC member countries that do not currently have their own observer programme. This year's course was held at the SPC office in Nabua, Fiji. SPC's Senior Deputy—General Director Jimmie Rogers opened the course. The observer trainer Ernesto Altamirano, from the Inter-American Tropical Tuna Commission (IATTC), presented and trained participants on aspects of the IATTC observer curriculum. US purse seiners often cross into the Eastern Pacific (east of 150° W) and when they do they are required to have 100% IATTC accredited observer coverage. A number of FFA/SPC observers are now being trained to carry out this role. These observers will be able to stay onboard and continue their observer duties with approved US purse seiners that choose to continue their fishing in the Eastern Pacific.

Eighteen participants attended: Tonga 2, Tuvalu 4, Niue 2, Tokelau 2, Palau 1, Vanuatu 2, Nauru 2 and Fiji 3.

Papua New Guinea: 2 to 27 June, 2003

The National Fisheries Authority (NFA) organised an observer training course in June. The course ran for five weeks. The National Fisheries College (NFC) in Kavieng ran the first two weeks of the course, which included sea safety, basic first aid, fire-fighting and radio communications. The observer component ran for three weeks and covered the two main types of tuna fishing gear operating in PNG's national waters—longline and purse seine. The course was run by Karl Staisch (FFA) and Siosifa Fukofuka (SPC). Two Senior Observers from PNG (Vitolos Tomidi and Glen English) also attended to familiarise themselves with observer training, as well as to present some parts of the training course (life onboard, common errors, a purse-seine vessel tour and practical fish sampling).



Participants at the Regional Observer Training Course.
Front row: Toara Alick, Laurence Abraham, Ioane Mamaia, Ace Capelle, Mikaele Peni. **Second row:** Mokeni Falaima, Viliamu Sioele, Soane Fakatava, Pelesala Kaleia, Karl Staisch, Ernesto Altamirano
Back row: Josese Rakuita, Kelemete Iasona, Bryan Hennings, Wilson Joseph, Peter Petelo, Sokotia Taufilo, Samuela Tovoleisuva, Launoa Gataua



Participants at the PNG Observer Training Course.
Front row: Damien Fiagori, Kemi Emo, Herman Kisokau, Elijah Lucas, Levi Kuamin.
Second row: Joyce Kalau, Rex Tabul, Richard Aisi, Albert Umarum, Linus Yakwa.
Back row: Donald Walker, Joshua Sione, Lawrence Pero, Jamie Maku, Greg Lawrence, Ronald Wala, Adrian Nanguromo

Andrew Rahiria (PNG) benefited from individual training (see photo on the right) when he boarded a PNG-registered purse seiner with SPC's full time observer trainer (Siosifa Fukofuka) for two weeks. The trip was used to document brailing methods and to take large amounts of video footage to be used as future training resource material.

Solomon Islands: 18 August - 4 September 2003

One of the largest observer training courses ever run in the region was conducted in Solomon Islands, by SPC and FFA. The training course was held at the FFA Conference Center in Honiara. There were more than 1000 applicants for the training course and, after many days of wading through the applications, the Ministry of Fisheries staff found 35 who met all the selection criteria. At the completion of the course, 31 were certified to carry out observer work.

At the end of the course the Observer Coordinator George Diau accompanied Siosifa to Noro, Western Province where Soltai's pole-and-line fleet are based. Video footage of the pole-and-line fishery was taken and this will be used as future training resource material.



**Solomon Islands trainees
hard at work in the classroom**

2003 Training Course Summary

Country	Date of observer course	Number of participants	Number of certified observers	Certified with distinctions
Cook Islands	3 February	10	7	2
Regional Course	14 April	18	15	2
PNG	9 June	17	15	2
Solomon Islands	18 August	35	31	2



Cetacean interactions with the tuna fishery

It's a hard start to the day. With muscles aching from the previous day's efforts and eyes squinting against a rising sun, few words are spoken as the crew get the day's hooks baited and into the water. The rewards, they hope, will come later. You can never be sure what the next fish to be hauled up on deck will be, but most crew members and observers imagine it will be large and valuable. When the reality turns out to resemble such a fish, but without the actual body, only the head left swinging from the end of the circle hook, the disappointment is evident.

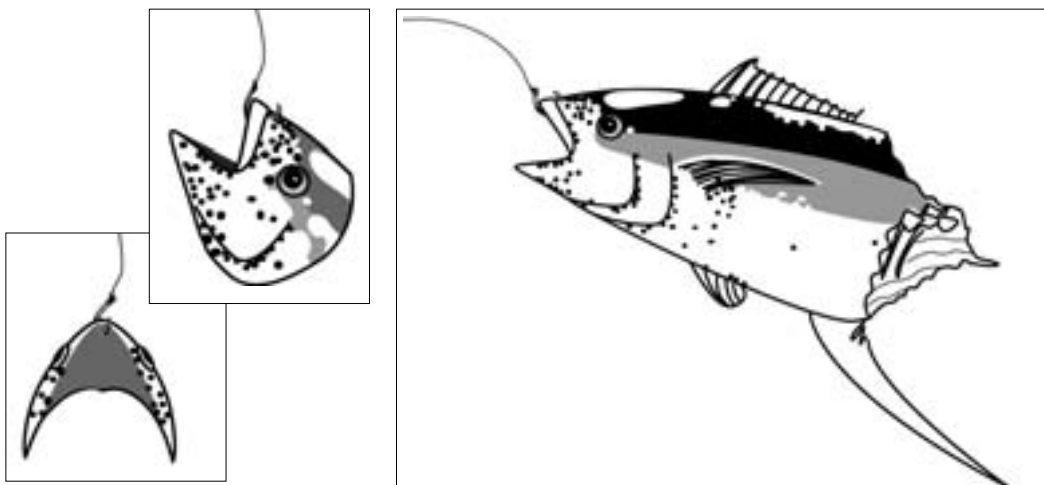
Observers are trained to record a fate code of DWD "Discarded Whale Damage" when they see such cleanly cut fish heads coming onboard. As they do they hope, along with the crew, of seeing no more of these heads. The risk of being jokingly being called a "Jonah" looms. But the chances are that more of these informative heads will follow—evidence of whales happily feeding on what the vessel has valiantly captured though its own efforts. And tomorrow's catch may already be lost, as the vessel lifts its gear in disgust and steams many miles to get away from the "whales".

How bad is the problem? A review by SPC, of observer data recorded between 1995 and 2000, indicated that the overall level of whale damage for all observed longline species was low, at 0.8% of all observed fish. This percentage was slight-

ly higher when only the tuna species are considered (1.2%). In comparison, shark damage was noted to be 2.1% of all observed species. While cetaceans (marine mammals including whales, dolphins and porpoises) have been blamed for removing hooked fish from the line, smaller cetaceans (dolphins) are said to remove bait from hooks, reducing the fisher's chance of ever catching a fish.

While the observed level of depredation (the removal of hooked fish or bait from longliners by cetaceans) in the WCPO is low, the overall observer coverage levels are also low (less than 1%), so it could be that the problem is worse than the observer data suggests. Additionally there are some concerns that the problem may be growing, although it is not clear if this is real or perceived. It is certainly true that many of the cetaceans involved are intelligent enough to learn this behaviour from other cetaceans.

At a recent workshop¹ on the problem at South Pacific Regional Environment Programme's (SPREP) headquarters, it was evident that it goes beyond the tuna fishery of the WCPO. Cetacean depredation was noted to be a problem in the tuna and swordfish fishery off Brazil, the Patagonian toothfish fishery in the South Atlantic, and the demersal sable fishery in Alaska. Bringing participants together from around the world showed the extent of the prob-



Whale damaged fish (left) are visibly different to shark damaged fish (right)

¹ Workshop on the Interactions between Cetaceans and Longline Fisheries, SPREP, Apia, Samoa.



Is shark damage worse? This 100 cm yellowfin was taken from a silky shark stomach recently caught in New Caledonia (note the hook and the trace). Probably the fisher never knew he had hooked this valuable tuna.

hole and locate their prey using echolocation. So it is the Odontoceti subgroup who are responsible for depredation. We believe that some of these whales use their teeth to grab and then violently shake the tuna or other species from the line without being trapped by the hook. Additionally, they may use a sucking motion to remove the fish from the line, as this is normal feeding behaviour for them.

The main suspects from the subgroup Odontoceti are part of the Delphinidae family (ocean dolphins). They may be called ocean dolphins, but many species in this group are large and whale-like, especially those in the subfamily Globicephalinae. Members of this subfamily are well known for their aggressive behaviour. Most have dark bodies with light colour patterns and are hard to differentiate, except when close up. The whalers called these whales the "blackfish". This name is still current today. They are the main suspects when it comes to taking fish from the WCPO longline fishery.

lem, but a standard index of depredation was not available. A standard index allows scientists to compare depredation levels from different regions, and also to assess whether the problem is growing.

The workshop recommended that a standard index of depredation, which states the number of damaged fish as a percentage of the total number of fish caught, should be used. Fortunately the data collection methods used by the South Pacific Regional Observer Programmes already employ this newly agreed standard. When observers record every single whale-damaged fish that is hauled onboard we can use this information to calculate the number of damaged fish as a percentage of the total number of fish caught.

But which whales are involved? Initially it is hard to know as the whales are rarely seen taking the fish, but some understanding of the basic feeding habits of cetaceans leads us down the right path.

There are two suborders of cetaceans—the Odontoceti and the Mysticeti. The Mysticeti do not have teeth, but rather baleen plates that they use to filter plankton for feeding. They also have two blowholes and do not echolocate their food. The Odontoceti have teeth, a single blow-

The actual species involved in this behaviour has not been positively identified, as they have rarely if ever been seen taking the fish. At times they may be seen in the vicinity of the boat. Some evidence suggests that they wait until the vessel starts hauling before removing the fish from the line. Although hauling is often done in the dark, observers may see these whales if they keep a good eye out for them. Observers should keep in mind that the FAO species code for all toothed whales or the Odontoceti is (ODN). This code should be used if you observe any "blackfish" or other toothed whales, but are unable to correctly identify the actual species.



Some of the main suspects taking fish in the Odontoceti subgroup, with their identification features, are:

False killer whale (*Pseudorca crassidens*) (FAW)

Size: To 5.5 m. Colour: Body is almost entirely dark except for light areas on the throat, chest and along the ventral midline. Black lips, no cape (darker region on back). Body form: Small narrow tapered head overhangs lower jaw, long and slender body. Fins: Dorsal fin is strongly falcate (sickle shaped), located mid-back, distinctive hump on the leading edge of the flippers. Behaviour: Known to approach boats and bow-ride.

Can be confused with: The pygmy killer whales and melon-headed whale and perhaps the pilot whales. The pygmy and melon-headed whales are much smaller, only about the half the size of the false killer whale, and both have white lips.



Pygmy killer whale (*Feresa attenuata*) (KPW)

Size: To 3 m. Colour: Body is mostly dark, with white areas only on the lips and belly. In good lighting conditions, it is possible to see a well-defined dark dorsal cape that dips below the dorsal fin. Body form: Long slender body, more robust at the front, slightly bulbous (rounded) head. Fins: Dorsal fin is falcate and located mid-back, flippers long with rounded tips. Behaviour: Generally aggressive, but often wary of boats. Has been seen inside tuna purse-seine nets.

Can be confused with: The melon headed whale and young false killer whales. May be difficult to distinguish between these in the wild, except when close-up.



Melon-headed whale (*Peponocephala electra*) (MEW)

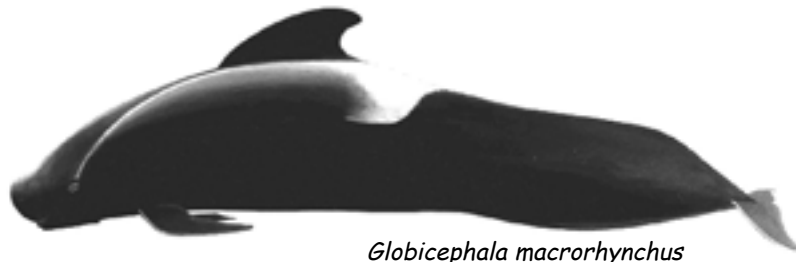
Size: 2.6-2.7 m. Colour: Dark back with cape that dips far down the sides, lips often white. Body form: Long slim body with slender tail, small head with somewhat pointed snout, the head looks beak-like or triangular from above. Fins: Dorsal fin tall, falcate and located mid-back, flippers long, slender and sharply pointed. Behaviour: Small numbers have been taken by gillnets and harpoon in the Pacific. Targeted by traditional drive hunts in Solomon Islands for their teeth.

Can be confused with: The pygmy killer whale and the false killer whale.



Short-finned pilot whale (*Globicephala macrorhynchus*) (SHW)

Size: To 6 m. **Colour:** Brownish black colour or dark grey, except for light markings on the throat and belly, may have faint saddle behind dorsal fin. **Body form:** Long and robust body with thicker tail area. Head is more bulbous (rounded) when compared to the other species; it is especially prominent in older males; head with slight beak. **Fins:** Dorsal fin located far forward on back, low but significant, broad-based, falcate to flag-like, flippers gently curved, pointed and less than one-sixth the body length. **Remarks:** Often thought to be involved in depredation of longlines but recent studies would suggest this species' diet is mostly confined to squid and smaller fish.

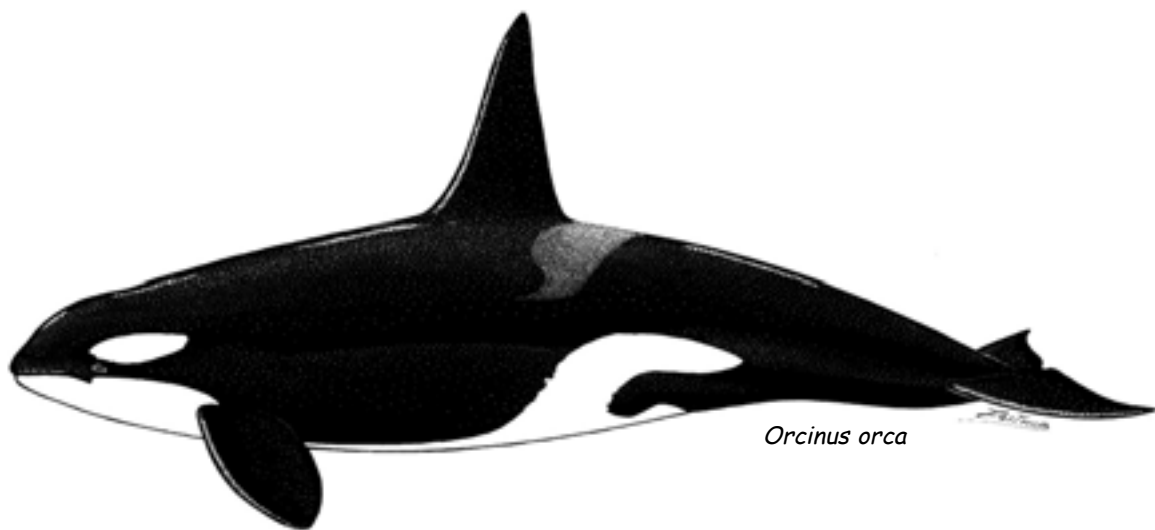
*Globicephala macrorhynchus***Long-finned pilot whale (*Globicephala melas*)**

The long-finned pilot whale is a temperate water mammal and although it resembles the short-finned pilot whale, except for its long pectoral fins, it is unlikely to be observed in tropical or subtropical areas.

Killer whale (*Orcinus orca*) (KIW)

Size: To 9.5m. **Colour:** Striking colour contrast, black body with white chin, belly and oval patch behind eye. **Fins:** Prominent dorsal fin.

The killer whale, although present in the tropical and subtropical regions of the Pacific, is presently not noted to take fish from the longline fishery in the tropical and subtropical areas. They have, however, been noted to take fish from the tuna and swordfish fishery in the South Atlantic, as well as fish from the Patagonian toothfish fishery.

*Orcinus orca*

Sperm whale (*Physeter macrocephalus*) (SPW)

Size: To 18 m. **Colour:** Dark grey-brown, some lighter blotches on belly and scarring around head. **Body form:** Huge, square head (one-third body length) with narrow underslung lower jaw, body (except for head) appears wrinkled. **Fin:** Dorsal fin single smooth low dorsal hump followed by a series of "knuckles".

The sperm whale is present in the tropical and subtropical regions of the Pacific, but it is currently not suspected of interfering with fish on longlines in this region. They are, however, known to take fish from the demersal longline sable fishery in Alaska and the Patagonian toothfish fishery in the South Atlantic.

*Physeter macrocephalus*

Hauling up cleanly cut heads indicates that toothed whales are around, but toothed whales are not the only whales observers may see while at sea. Baleen whales (Mysticeti) may be observed from vessels, especially on the clear calmer days. As all whales are protected species in many of the region's exclusive economic zones (EEZs), observers are strongly encouraged to record any sighting of these on the newly introduced GEN-2 form, "Species of Special Interest". The following countries (from east to west) have all declared their EEZs, to be whale sanctuaries: French Polynesia, Cook Islands, Niue, Samoa, Tonga, Fiji Islands, Vanuatu, New Zealand, New Caledonia, Australia and Papua New Guinea. At the recent Pacific Forum leaders meetings in New Zealand, these declarations were welcomed, but the participants also noted that greater scientific knowledge was needed on the cetacean populations that are present in the region and more particularly their interactions with the fisheries in the South Pacific.

Despite many years of whaling, information on the cetacean populations in the Pacific is still sketchy. Observers can help to fill in some of these gaps. Species identification may be difficult at times, but by using the FAO species group code (MSY) for all Mysticeti whales observers can help to add to this knowledge. Of the eleven Mysticeti whales only six are normally present in the Western and Central Pacific. Of these it is likely that observers will only see four of the more abundant species: Bryde's whale (*Balaenoptera edeni*) (BRW), minke whale (*Balaenoptera acutorostrata*) (MIW), fin whale (*Balaenoptera physalus*) (FIW), and the humpback whale (*Megaptera novaeangliae*) (HUW). The blue whale and the sei whale may migrate into the area at times, but are not thought to be as abundant.

BALEEN WHALES (MYSTICETI)

Bryde's whale (BRW): 13-15 m, dark grey body, lower lips grey, slightly arched upper jaw with three prominent ridges.



Minke whale (MIW): 9-10 m, small size, head is sharply pointed, white bands on both flippers.



Fin whale (FIW) : 17-24 m, lower right jaw white, lower left jaw dark, v-shaped or chevron pattern behind head often visible.



Humpback whale (HUW): 11-16m, stout body, tubercles (knobs) on head and jaw, body black above, white/black/mottled below, pectoral fins long, dorsal fin broad with an irregular trailing edge.

National Observer Programme update



Cook Islands: *National Observer Coordinator:*
Andrew Jones

Seven longline trips were covered by the observer programme last year (2002). The observer programme also looks after port sampling and the collection of logsheets. A new

wharf is presently under construction and it is expected that this will increase the number of longliners, who will be the main users of the wharf. Finding observers in the Cook Islands is often difficult due to the small population and a number of other opportunities available on the island, especially tourism and pearl farming.



Fiji Islands: *National Observer Coordinator:*
Filipe Viala

The Fijian Observer Programme, which had remained close to dormant since the initial in-country training in 1997, came back to the starting line in mid-2002. The foundations of this new start lay in the finalised Fijian Tuna Development and Management Plan, which specifically mentioned the need for an Observer and Port Sampling Programme in the local Fisheries Division. That need was realised when a fresh team of observers were trained in-country in June 2002. This solid base was given further resources with funding provided by SPC for a local National Observer Coordinator. One of the most experi-

enced tuna-observers in the region came onboard as the Coordinator in July, Filipe Viala.

Since its inception the observer and port sampling programme has provided an increasing amount of high quality port sampling data for all vessels unloading into Fiji, including not only those that fish domestically, but also those vessels that fish in other EEZs and the High Seas. The constant presence of observers at unloadings and the inevitable interactions they have with the vessels has improved the clarity of the submitted logsheets. Since its inception a small number of observer trips have been covered (one a month), although it is proposed to increase this number to four a month in the coming year. The Fijian observer programme will cover both longline and pole-and-line vessels.



Federated States of Micronesia:
National Observer Coordinator:
Steve Retalmai

In 2002, the NORMA Observer Programme operated with 11 observers but four resigned towards the middle of the year, as they found other jobs with the Pohnpei State Government. This brought the total to seven able observers. Our best wishes and thanks for a job well done to Henry Norman, Kenait Fritz, Sidney Regan Lebehn and Mohns Gilmete.

A warm welcome is extended to the new recruits Stephan Carlos and Josten Nena, both College of Micronesia-FSM graduates with AS degrees in Marine Science. The new recruits were trained by the Fisheries Resource Analyst and the Observer Coordinator. Stephan has already made a strong start with quality data produced for six trips, while Josten has at least one longline trip under his belt.

Total observer trips for the fiscal year 2002 was 49, although the programme was aiming at 60. There were financial problems with the observer accounts so observer placements were put on hold for the month of August through October 2002. The programme has also spent time on the additional duties of stomach sampling and turtle tagging.

Pohnpei was the most active unloading port. Longline unloading in Yap has been inactive since all the Chinese longline vessels migrated to Pohnpei in March. Samplers in Chuuk, however, are still reg-



**Goodbye and farewell to
Tim Park**

ularly given the opportunity to sample two or three vessels from the Guam based longline companies.

Finally we would like to give our heart-felt wishes and gratitude to Tim Park (Fisheries Resource Analyst) who has guided the FSM observer programme since 1995 and contributed to the overall development of standardised national observer programmes in the region during that time. Tim always went that extra

mile to help observers out, way beyond his "duty statement" and many of the FSM observers will remain indebted to him for his help over the years. Other observers who unexpectedly drifted into one of the FSM ports were ensured of a warm welcome and a safe passage home. His contributions and congenial attitude will be missed by both those in-country and his regional colleagues who have had the pleasure of working with him over the years.

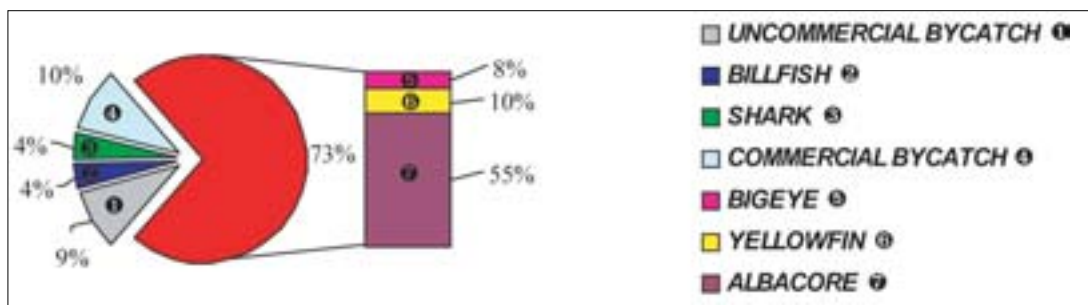


French Polynesia: National Observer Coordinator:
Vatea Escande

The French Polynesia Observer Programme started in October 2002. The programme has two observers as well as the National Coordinator. The local fleet they cover is made up of fresh sashimi-grade longliners that stay at sea for approximately 3 weeks, and larger vessels that stay at sea for up to six weeks. These larger vessels use blast freezers to store their catch, which is loined and packed onboard. The present fleet is made up of 56 vessels, 42 of which target sashimi-grade and 14 who blast freeze their fish. The fleet is expect to grow to about 100 in the next two years. To date the observer programme has completed 23 trips,

mostly on the fresh sashimi vessels. They have clocked up 291 sea days, and during that time they have seen 41 different species of fish. The chart below gives a breakdown of the 7293 fish that have already been observed by the programme. Stomach samples have also been taken and sent to SPC for further analysis.

One unusual fish that came up was the Pacific fan-fish (*Pteraclis aesticola*). A captain of a vessel that had previously been boarded by an observer handed in this unusual fish. The National Observer Coordinator was able to positively identify the species (see photo page 16). Was it a strange coincidence that the one other French-speaking Observer Programme, New Caledonia, also saw this rarely seen fish, around the same time?



Observer longline catch composition



Kiribati: National Observer Coordinator:
Tekirua Riinga

The Kiribati Observer Programme is a relatively young programme. It has benefited from two observer training courses, one in the capital Tarawa and another in Christmas Island. Of the 34 observers

trained, 15 are still with the programme. To date 25 observer trips have been completed. One administrative problem, which has seen a number of observer trips cancelled, is the lack of appropriate US visas held by the observers. This has been especially difficult for the Christmas Island observers as their only exit and entry port is via Hawaii. Some progress has been made,

however, in attaining multiple entry US visas for the Christmas Island observers. The National Coordinator is now trying to ensure the Tarawa

based observers also have multiple entry visas. As 2002 was an El Niño year the ports of Tarawa and Christmas were busier than usual.



Marshall Islands: National Observer Coordinator:
Manasseh Avicks

The Marshall Islands Observer Programme is all set for a fresh start. MIMRA (Marshall Islands Marine Resource Authority) has taken the initiative to recruit, under a joint funding arrangement with SPC, an experienced Observer Coordinator

to strengthen their National Observer Programme. While the programme has been submitting a steady flow of purse-seine port sampling data since 1998, there has, for a number of reasons, only been a handful of observer trips to complement this work. The programme will now strive to build up the observer experience of the local staff so they can carry out both port sampling and observer duties independently. We look forward to hearing of their activities in the future.



New Caledonia: National Observer Coordinator :
Geoffrey Bertrand

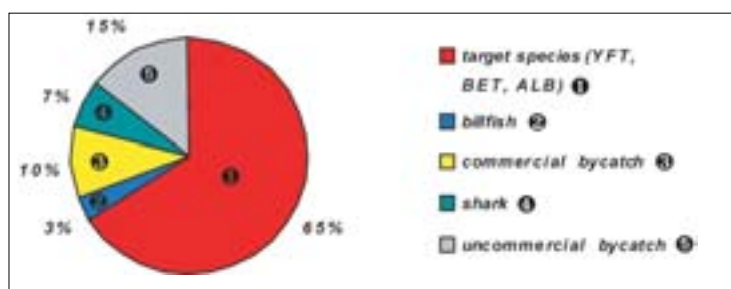
The domestic tuna fishery in New Caledonia is relatively new. There are presently 28 longliners operating in the EEZ. There are no purse seiners and no pole-and-line vessels. The longliners target sashimi-grade tuna, primarily yellowfin and bigeye, which are flown directly to Japan. Albacore is sold on the local market and is exported for canning. The New Caledonia Observer Programme started in June 2002. At the moment there is only one observer and one coordinator. To date 16 trips have been completed, in 185 sea days. The chart shows the observed species composition from these trips. It is interesting to note that two-thirds of the catch was made up of the target species. During one of his trips the National Coordinator paid special attention to the different species of lancetfish that are frequently caught in New Caledonia. Some of his photos are published on page 18. The programme has also contributed a number of samples for the stomach sampling project.

Port samplers work in the two longline unloading ports of Noumea and Koumac. The Noumea based samplers were recently surprised (August 2003) to find a 216 cm bluefin under their calipers. Initially it looks as if it was a Pacific bluefin (*Thunnus orientalis*). A muscle sample has been collected for genetic analysis and sent to New Zealand to check on the species identification. Another strange fish was handed over to the port samplers on 3 July. It was identified by the observer coordinator to be a Pacific fanfish (*Pteraclis aesticola*) {FAO species identification code: TEE}. This species is a member of the Bramidae or pomfret family. It is quite rare so its unlikely that observers will see it frequently.



The rarely seen Pacific fanfish, *Pteraclis aesticola* (TEE)

Observer longline catch composition





Papua New Guinea: *National Observer Manager: Noan Pakop; Deputy Observer Manager: William Kewo*

The PNG observer programme went from strength to strength during 2002 and into 2003. The programme has continued to grow from a firm foundations since a 1999 Asian Development Bank loan was used to fund re-structuring of the National Fisheries Authority. There are now 58 observers onboard. Further training is planned as the programme hopes to increase the total number of observers to 80. The programme strives to achieve pre-determined observer coverage target levels. (The coverage rates range from 100% on trial fisheries to 5% for "other fisheries". The current foreign fleets coverage rate is 10%, but this is expected to rise to 20% in the long term.)

A total of 124 trips were made in 2002. In the last two years, observers have been continuously assessed for their competence, conduct and performance. As a result, good observers have been made senior observers, some have been demoted and restricted to port sampling, and a few who could not compete and failed to grasp the basic concept of the programme have been made redundant. One of the exceptionally good observers is now the Deputy Observer Manager. Due to the size of the programme, the senior observers conduct all debriefing at the designat-

ed ports. SPC has held two data quality training courses in PNG, to help senior observers with this work. The first was in 2002, and a refresher course was held in early 2003. The deputy manager, who is responsible for the overall quality of the observer and port sampling data, was invited to SPC during January 2003 to improve his own abilities in the area. PNG observers are currently collecting stomach and muscle samples for ecosystem studies. They are also collecting juvenile tuna, which will be used to assess the effect of ENSO events (El Niño - La Niña cycle) on tuna growth.

Apart from the observers there are 17 dedicated port samplers spread around the main fishing ports. Observers may also help with port sampling duties. Port sampling coverage increased dramatically at the start of 2002. There is now 100% coverage of all longline unloading. PNG's purse-seine fleet tranships at sea, under a special agreement, which ensures 100% observer coverage. Purse-seine port sampling is therefore confined to foreign fleets. Since the beginning of 2003 there has been an increase in foreign purse-seine transshipment activity in Wewak port. Port calls into Wewak will increase in the future due to the construction of the massive tuna loining factory by South Seas Tuna Fishing Corporation, which is scheduled to be completed and in full production by the end of the year. The factory has an expected production capacity of 260 tonnes per day.



Solomon Islands: *National Observer Coordinator: George Diau; Assistant Observer Coordinator: Titus Pidiri*

Despite the country's continuing difficult domestic situation, the Solomon Island Observer Programme led the way in 2002, covering a remarkable 177 observer trips on their domestic fleets (118 pole-and-line trips, 53 on longliners and 6 on purse-seiners). This remarkable number was achieved by thirteen observers who were initially trained in 1996.

These observers now have many years of experience under their belts and produce quality data. The observers benefited from a data quality course run by SPC and FFA at the start of 2003, which introduced them to the new forms

(December 2002 edition) and reviewed some of the recurring common errors they need to avoid. A small number of the Solomon Island based USMLT observers also sat in for the course. The Solomon Island Observer Programme is now setting their sights even higher and hoping to achieve high coverage on their domestic fleet during 2003 (30% of longliners, 40% of pole-and-line and 100% of purse-seiners). To help them achieve this FFA and SPC organised an observer training course in September, 2003.

Port sampling has yet to re-start after the political upheaval brought things to a halt, but it is thought that this too will re-commence in the near future, complementing the strong monitoring efforts undertaken by the observer programme.

Do you know this fish?

Lancetfishes

Lancetfishes are commonly caught on longline vessels. Less common, however is time for an observer to positively identify the fish, as many are struck off before landing. If this is the case observers can use the FAO species group code for lancetfishes (**ALI**) to record these fish. For those fish that are landed, observers need to be able to differentiate between the two lancetfish species, the longnose lancetfish (*Alepisaurus ferox*) (**ALX**), and the shortnose lancetfish (*Alepisaurus brevirostris*) (**ALO**).

Note that the dorsal fin on the longnose lancet fish starts after the operculum (gill cover). The dorsal fin edge is not uniform, with a number of longer dorsal spines especially at the beginning.

With the shortnose lancet fish the dorsal fin starts just before the operculum. The dorsal fin edge is uniform and there are no long trailing spines.



The longnose lancetfish (top) and the shortnose lancetfish (bottom)



Longnose lancetfish (*Alepisaurus ferox*) (**ALX**)

Shortnose lancetfish
(*Alepisaurus brevirostris*) (**ALO**)



Sunfishes

While many experienced observers will be used to seeing the relatively common and large sunfish (*Mola mola*) (**MOX**), a few other species of sunfishes do exist and may be observed by WCPO observers, if somewhat less frequently. One of these is the slender sunfish (*Ranzania laevis*) (**RZV**), pictured here by Bruno Leroy after landing onboard a Tahitian longliner.

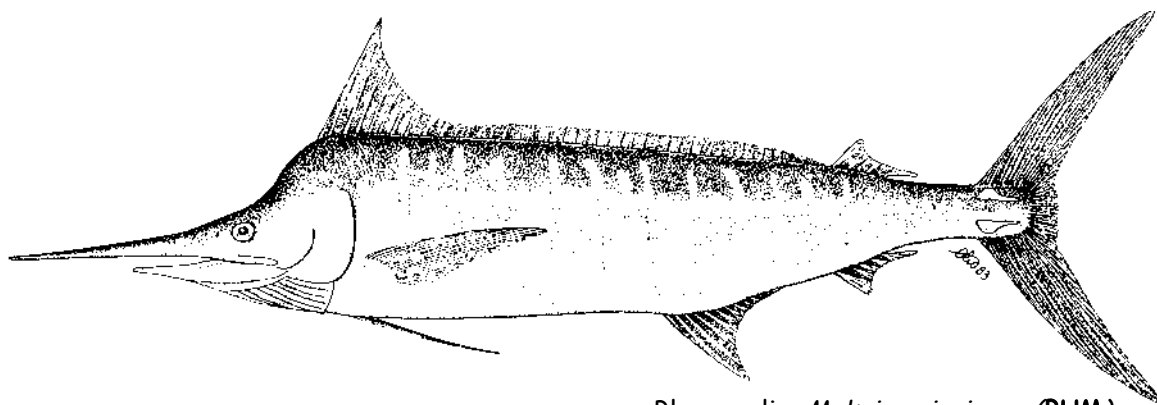
It's a colourful species and its maximum length is 90 cm.



Name change

The Food and Agriculture Organization (FAO) has decided to change the species codes and scientific name, for the Indo-Pacific blue marlin (*Makaira mazara*) (**BLZ**). The scientific name will be replaced with (*Makaira nigricans*), and the species code will now become (**BUM**). The common name for this species will be defined as blue marlin. It was thought that two species of blue marlin existed, the Indo-Pacific blue marlin (*Makaira mazara*) and the Atlantic blue marlin, (*Makaira*

nigricans), but recent genetic studies have now shown that there is only one species of blue marlin in the world's oceans. Observer and port samplers, can immediately start using this new code on their data forms, although it will probably take some time to change all the training materials and form instructions, so the old code will still be acceptable for some time to come.



Blue marlin, *Makaira nigricans* (**BUM**)

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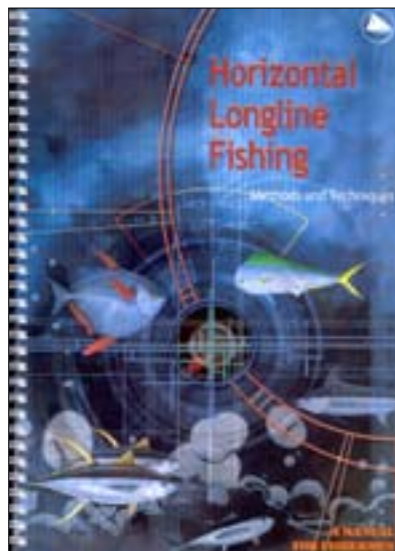
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Horizontal Longline Manual

SPC has recently published Horizontal Longline Fishing — Methods and Techniques to help Pacific Islands fishermen understand and improve their management of longline vessels. The manual is clearly laid out and covers such topics as: gear and how to use it, working with ropes and lines, deciding where to fish, the handling and preservation of the catch, and respon-

sible fishing. Observers will benefit from reading the manual, as it will increase their knowledge of longline operations. Copies of the manual are now being sent to each observer programme as resource material. We suggest that those observers who would like to expand their longline fishing knowledge find time to read a copy.



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Original text: English

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