

during low tide, to make the most use out of the long walk to the outer reef fringes.

Step two: During the next high tide — weather permitting — the women return to the same site. Now, about 100-m-long and 1.5–2 m-wide nets with small mesh sizes are put into place. The nets surround the *vono* and extend at either side along the radial lines of hard coral pieces laid out during the previous low tide. One woman unfolds the net. Another woman weaves into it an equally long cord from which palm leaves are dangling in 50 cm intervals. This is mostly done under water and the woman in charge wears goggles. She also secures the net with the hard coral pieces. Once the nets are set, the group may split up. However, at least two women must stay behind to watch and tend to the nets while the rest of the group may return to the village.

Step three: During the second half of the next low tide, the women's group reassembles at the *vono* site. One or two women take charge of grinding *duva*, a poisonous root (*Derris* sp.), which they dilute in the artificially enlarged basin. The desired effect of stupefying fish becomes visible after 10 to 15 minutes. Fish escaping from their hiding places are slowed down in their movements and show obvious signs of distress. Smaller fish may die quickly. Other women surrounding the *vono* hold up the net to prevent fish from escaping. Women inside the netted

Setting the *duva* under rocks in the reef to stupefy fish.



Grinding *duva* and diluting it.



Sorting and cleaning the catch.

area collect the fish by hand, stab the bigger and still fitter ones with a knife or chase them in the net where they are easily killed and collected. Teenage boys, using home-made spears to expertly spear down all the fish that managed to slip the net, help out with this final *vono* step.

Depending on the area encircled, and the amount of fish trapped, this last step may last 1 to 1 1/2 hours. The catch is collected in hand-woven baskets made from coconut palm leaves and

defended against the hungry seabirds circling the site.

Before collecting the nets, the fisherwomen may settle on a spot in the reef where the catch

is sorted into suitable fish to be brought home, and those to be eaten on the spot. Fishermen from the village may walk by and be rewarded with some smaller fish that they can use as bait for handlining. All fish are cleaned and the livers are eaten; smaller fish are consumed raw. Usually, this feast is well prepared as the women bring cooked root crops, chillies and lemon to accompany and improve the fresh fish meal *al fresco*. Once, everybody is satisfied, the equipment is gathered up and the group heads home to the village where the catch is shared equally. On the way, small shellfish may be collected to complement the next family meal.

The life of a commercial fisherwoman

By Lyn Lambeth, former SPC Community Fisheries Officer

After five years of working in community fisheries management in the Pacific, I decided to spend a year in my old job — fishing for Spanish mackerel, *Scomberomorus commerson*, in Australia's northwest. I caught up with the boat I used to work on, F/V *Rachel*, in Darwin in February 2002, and spent a couple of months helping with the pre-season maintenance before heading to sea in April. I first worked on the *Rachel* 20 years ago when she was shark fishing in the Northern Territory. I maintained my friendship with her owners-operators, Pam Canney and Ian Lew, after leaving the capture side of the fishing industry eight years ago. This

year was to be a 'working holiday' — a chance to catch up with old friends, get away from computers and deadlines, see some more of the wonderful Kimberly coast, and exercise arm muscles by pulling in some of those big, fighting fish.

Pam and Ian are relatively unusual in the industry in that they often choose to have one or two women in their crew of three to four deckhands. The *Rachel* is their home as well as their workplace, and they've found that a mixed crew creates a more balanced work and living environment. The work can be physically demanding, but

everyone has their strengths and weaknesses — the main requirement is the ability to work well with a small group of people in an isolated environment. This year there are five of us on board — Pam and Ian, myself, and two other deckhands, Tony and Ed. Tony and I are veterans of five or six mackerel seasons while Ed has only just left school and is a newcomer to the industry. Everyone on board is expected to help out with the various tasks, including cleaning and cooking, watchkeeping, pulling in fish, filleting and packing, and maintaining fishing gear.

Spanish mackerel are caught by trolling lures or bait behind a boat travelling at around four knots. The fish, which can reach over 30 kg, are pulled in by hand. *Rachel* carries three fishing dories — 5–6 metre fibreglass boats with inboard diesel motors — that operate independently once out on the fishing ground. Each dory runs two or three lines, while *Rachel* runs eight. The dories are specially designed for this type of fishing, with the operator standing in a 'steering pit' separated from the 'killing pit' into which the fish are pulled. Most dories have a foot-operated tiller, leaving both hands free to pull in the fish. Spanish mackerel have razor sharp teeth so it's best to keep well away from their mouths — even a dead fish can leave a nasty scar if you accidentally run into them on deck. The fish are well known by game fishermen for their size and fighting spirit and it can be a struggle to pull the larger ones on board. Often we have problems with sharks chasing the fish as we pull them in. We can end up with half a fish, a head, or worse — a big shark on the end of the line. If that happens we can only try and pull the shark on board or cut the line, though often they just straighten the hook and escape.

Rachel's dories have names and personalities of their own and the three main 'dory men' on board (Ian, Tony and myself) are quick to defend their personal workboats — we each use one particular dory and rarely venture out in another. While the three dories are out working, Pam trolls with *Rachel*, with Ed on the stern to help pull in the fish. When travelling between fishing grounds the dories are lifted up by a hydraulic winch and chained in place, one on either side of the main boat and one along the stern. In rough seas the dory lifts can become quite tricky as we try to control a boat weighing up to a tonne from swinging into the side or stern.

A typical fishing day at this time of the year starts at 4 a.m. Everyone is up and straight into work before first light. The three dories are lowered and Ian, Tony and I head off as the first glimmer of light enters the sky. *Rachel* also starts trolling, and we all try to keep out of each other's way in the half-dark. From there it all depends on the fish. We can be

immediately busy with all lines catching, or it can be a slow and peaceful start to the day, sipping a cup of hot tea and watching the sunrise with one eye on the lines. Generally the dories will stay out for two hours or so before taking the catch back to *Rachel*. A good morning will see each dory with around 20 to 30 fish, on a busy run they can double that. Often enough we traipse back with less than 10 fish each. When the fish are really biting, *Rachel* can end up with 80 or 90, so an exceptional morning or evening run can see us with around 300 fish to process. After unloading the fish and lifting the dories it's time to grab a quick breakfast and start filleting and packing. All the fish are filleted, quartered, packed into 10 kg boxes and placed in the freezer. The previous day's boxes must first be moved from racks in front of the blast fans to the holding room before fresh boxes are put down. *Rachel's* freezer holds around 1000 of these boxes, or 10 tonnes of fillets.

Often while we're filleting and packing we travel to another fishing ground. Once there, dories are lowered again and the process starts over again. Generally though, the best fishing runs are the first and last runs of the day, and we often have some time off in the middle of the day to fix gear, make up baits, make cartons (for packing the fish), eat, read and sleep. If the fish keep us really busy on the last run (from 3.30 to around 6.30 p.m.) we may still be filleting and packing late into the night. We also travel between grounds at night, taking turns to do two- or three-hour watches throughout the night, but generally we can count on working during the day and sleeping at night. As far as fishing goes, it's a fairly civilised existence — I've worked on prawn trawlers and barramundi gillnetters where much of the work was done throughout the night with sleep coming in three-hour stretches.

It's a very nomadic existence — the *Rachel's* fishing grounds stretch from the northwest top of Australia down to Port Hedland, a distance of around 1000 nautical miles. The fishing season lasts around seven months and during that time we travel almost constantly from fishing ground to fishing ground. We spend from one week to three weeks at sea before calling in to Port Hedland, Broome or Darwin for a day or so, to provision and sometimes unload. Unloading is mainly done by hand — a chain gang of eight people is usually enough to shift 10 tonnes from the freezer to the truck in a couple of hours of hard work. The huge tidal range in the northwest of Australia, however, means we sometimes have to use cranes and winches to move the boxes up to the wharf, if it's a low tide. The tidal range in Broome, for example, can be close to ten metres.

From June until September we share these waters with humpback whales, which come up from

Antarctica to have their calves, and seem to spend time 'playing' in the tropical waters. In the peak of the season we see several whales each day, often leaping out of the water in great displays. Other highlights are seeing dolphins, turtles, sailfish, manta rays, flyingfish, sea snakes, and countless sunrises and sunsets over the water. A few months ago, I unexpectedly caught a two-metre marlin on a lure (a very unusual occurrence in mackerel fishing). I initially thought it was a huge Spanish mackerel and so pulled like crazy. But after the initial adrenaline rush of getting this large fish into the dory I suddenly realised we didn't want or need it, and I was frantically trying to get it back into the water unharmed. One of the other dories came over to assist, and we lassoed it around the tail, hauled it overboard, and released it.

We are now heading into a wonderful part of the season — the fishing is slowing down, we've

caught the bulk of the year's catch, and we'll be taking more time off to explore the myriad islands, rivers and inlets of the Kimberly coast. That is, perhaps, the best part of the work — seeing some of the most inaccessible parts of Australia. In addition, the weather is moving from the 'dry' season to the 'wet' season and we can expect spectacular tropical clouds, storms and seas, though hopefully not cyclones. For the remaining two months of the season I hope to be beachcombing, exploring and swimming in between pulling in those fish.

I love being at sea and have not yet tired of the excitement of Spanish mackerel fishing, despite the hard work, long days and sometimes broken sleep. Next year may see me working back on the other side of the coin, in fisheries management instead of fishing, but at least I know I can still go and catch Spanish mackerel whenever I feel the lure of the sea.



Vono fishing in the Lau Group, Fiji Islands – Photo by Mecki Kronen

PIMRIS is a joint project of five international organisations concerned with fisheries and marine resource development in the Pacific Islands region. The project is executed by the Secretariat of the Pacific Community (SPC), the South Pacific Forum Fisheries Agency (FFA), the University of the South Pacific (USP), the South Pacific Applied Geoscience Commission (SOPAC), and the South Pacific Regional Environment Programme (SPREP). This bulletin is produced by SPC as part of its commitment to PIMRIS. The aim of PIMRIS is to improve



the availability of information on marine resources to users in the region, so as to support their rational development and management. PIMRIS activities include: the active collection, cataloguing and archiving of technical documents, especially ephemera ('grey literature'); evaluation, repackaging and dissemination of information; provision of literature searches, question-and-answer services and bibliographic support; and assistance with the development of in-country reference collections and databases on marine resources.