

## SPC ACTIVITIES

### Central Pacific cruise #5: 6,359 tunas tagged and released onboard the FV *Pacific Sunrise*

The Central Pacific (CP) tagging cruises are part of the Pacific Tuna Tagging Programme (PTTP) that started in August 2006 with the objective of tagging and releasing tropical tunas throughout the western and central Pacific Ocean (WCPO). These CP cruises were designed to catch and tag tuna in areas where pole-and-line fishing gear is not efficient due to the absence of baiting grounds. Using specific trolling gear developed in Hawaii, and targeting US National Oceanic and Atmospheric Administration Tropical Atmosphere Ocean (TAO) oceanographic buoys anchored east of the dateline, CP tagging cruises have improved the overall spatial coverage of PTTP tag releases and have increased the number of tagged bigeye tuna that are rarely caught by pole-and-line gear in the western part of the WCPO.

The previous four CP cruises used a Hawaiian-based fishing vessel but this time, the *Pacific Sunrise* (Fig. 1a), a multi-purpose 22-meter boat based in Nuku'alofa, Tonga was chartered. The vessel left Tonga on 13 November with six people onboard, including captain Eti Palu, Bruno Leroy (cruise leader, SPC), Malo Hosken (assistant tagger, SPC) and four Tongan crew members (Fig. 1b). After a stop at Pago Pago, American Samoa for refueling, the vessel visited 10 TAO buoys moored along the 170°W and 180°W meridians, and passing through Tokelau, Kiribati (Phoenix and Gilbert Islands), Howland and Baker Islands, and Tuvalu. The cruise ended at Mata'utu (Wallis Is) on 7 December after a 3,200 nm journey (Fig. 2).

The crew were lucky to find good tuna aggregation around four of the TAO buoys. Although this was the first time for the *Pacific Sunrise* to fish that way, the vessel quickly revealed to be a very efficient "tagging machine"!

The captain is, in fact, a very experienced tuna tagger (he was one of the regular taggers during the Regional

Tuna Tagging Programme in the late 1980s) and this was a big asset to the cruise. Three tagging cradles were mounted on the aft deck (two for conventional tagging and one for archival tagging). When the cruise leader was busy deploying archival tags, the captain was able to operate one of the other cradles. This was an efficient way of releasing conventional tags during the fast bite morning tagging sessions. The four crew members hauled the fish (Fig. 3) from the 10 to 12 short troll lines deployed around the deck. Most of the tuna were in the 8–12 kg size range but fish up to 25 kg were also caught.

On this cruise 6,359 tuna (a record for all CP cruises) were tagged, including 58 with archival tags; 96% of these were bigeye tuna (*Thunnus obesus*) (Fig. 4).

Fish that were unsuitable for tagging were kept for biological sampling.

Two crew members assisted in the collection of biological samples. Their efforts were of a high standard and, thus, in agreement with the captain they were trained in the sampling techniques and were instructed

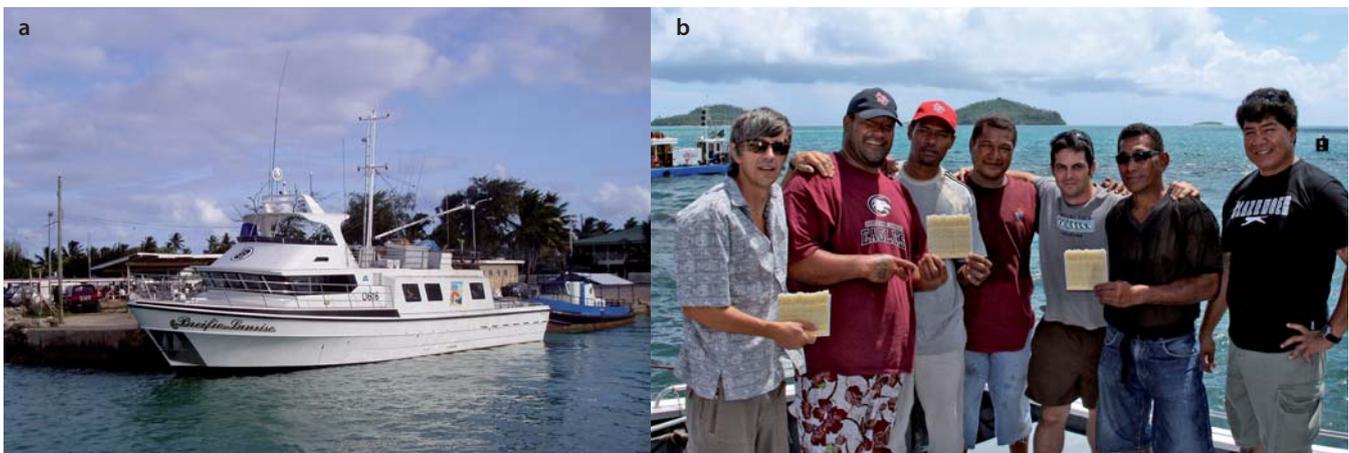


Figure 1. a) FV *Pacific Sunrise* in Nuku'alofa harbour, Tonga; and b) End of cruise group photo. Left to right: Bruno Leroy, Hopoate Fakatoumafi, Alani Latusele, Uilisanasi Fanua, Malo Hosken, Lousinimani Potoi and Etimoni Palu.

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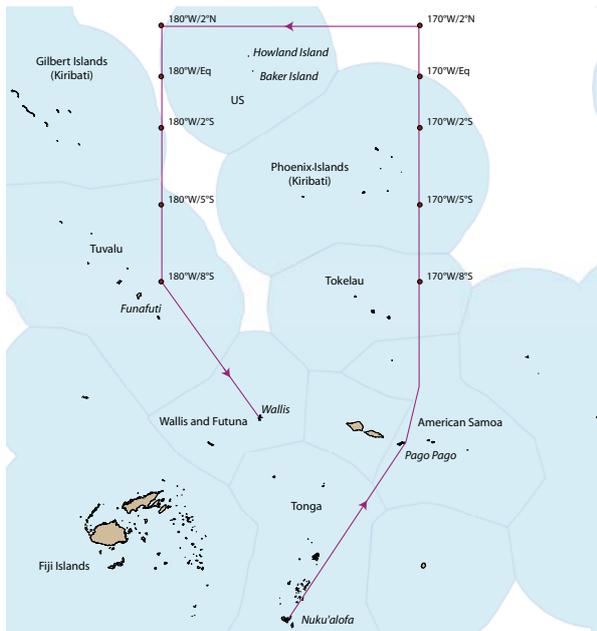


Figure 2. The track of the FV Pacific Sunrise during the CP 5 tagging cruise.

in how to record data correctly. They will sample tunas and bycatch species during future commercial longline fishing operations in Tonga's EEZ.

For more detailed information, read the cruise report on SPC's tagging website: <http://www.spc.int/tagging/en/publications>



Figure 4. Juvenile bigeye marked with conventional 13-cm yellow tag.



Figure 3. Crew members haul in two bigeye tuna from the first starboard dangler station. Note spray system.