

retention was higher for cultivated shell than for wild caught shell. This is probably due to the more uniform size of the hatchery stock and that they are grown using aquaculture techniques and have higher tolerance to stress during handling.'

Now five years old, the Darwin Hatchery Project is the first co-operative pearl oyster hatchery in Australia. The dedicated management and staff continue to improve their techniques to produce quality spat for the expanding pearl oyster industry.

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## Notes on 'pipi' pearl oyster, *Pinctada maculata*, fishing in Tongareva, Cook Islands, 1995

by Kelvin Passfield

Tongareva Atoll, also known as Penryhn, is situated in the northern Cook Islands, 9°S and 158°W. Two species of pearl oyster are common in the lagoon, the 'parau' or black-lip pearl oyster, *Pinctada margaritifera*, and the much smaller 'pipi', *Pinctada maculata*. Cultured black-pearl farming using black-lip pearl oysters (*Pinctada margaritifera*) has recently been initiated in Tongareva. Over 60 farmers participated in the first harvest in 1995. There is also a pearl oyster hatchery situated on Tongareva, built with assistance from USAID in 1994–95.

This note, however, deals with the lesser-known pipi. Pipi (*Pinctada maculata*) is gathered by both sexes, and is one of the few fisheries in Tongareva which involves women. The pipi are collected from the tops of the patch reef within the lagoon. Mask, snorkel and gloves are the necessary items, and the shells are simply plucked from the reef, to which they are attached by their byssus. Pipi are collected primarily for the natural pearls which are sometimes found inside. Some of the meat is also eaten, though a considerable amount is wasted.

Fishing activity was closely observed on one occasion. Two women collecting for 50 minutes collected 21 kg of pipi. This equates to what is commonly referred to as a 'bag', i.e. approximately one full 25 kg rice sack. This is the common unit of measurement used by pipi collectors.

Seven kg of pipi were counted out, for a total of 355 pipi. Therefore approximately 1000 pipi would constitute a bag. It took 3 ladies approximately 2 hours to open the 7 kg of pipi. 50 pipi were weighed (852 g), and the shucked meat was also weighed (121 g), giving a recovery weight of around 14 per cent. The meat can be eaten raw or cooked, and is

very tasty, though a little gritty. On this occasion, in the 7 kg sample, only one saleable pearl was found, as well as 3 others of no commercial value. The number of pearls found in a full bag of pipi varies greatly, with sometimes no valuable ones found at all, and sometimes as many as 20 of various qualities.

Pipi pearls are a significant source of income for Tongarevans. As they are found, they are stored in small jars. They are then often used as a cash reserve. When a major purchase is required, for example a TV or video, new freezer, etc., the jar can be sold to buyers in Rarotonga. Although exact figures are difficult to obtain, jars containing an unknown number of pearls are sold for several thousands of dollars.

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