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## Cook Islands Pearl Industry Developments

By 1985, the viability of small-scale simple technology pearl-oyster culture in the Cook Islands had been proven. The first crop of cultured black pearls was harvested from eight privately-owned farms in Manihiki, this past April. The harvest took place 18 months after the Japanese seeding technician had operated 10,000 oysters. Quality of pearls was mixed, with some exhibiting excellent colour. Pearls harvested from oysters originally collected on artificial spat-collectors were superior in every respect to those produced from pearl oysters which had been collected from the wild.

A further return from this harvest has been the heightened interest among neighbouring islands in the development of their own pearl farming activities. Requests for assistance in this area have been directed to the Ministry of Marine Resources through the Island Councils of Penrhyn, Rakahanga, and Pukapuka. Particularly pleasing is the increased dialogue between central government and the various Island Councils on matters relating to pearl farming.

Developmental work in pearl farming is also being undertaken on Suvarrow to establish a government-owned pearl farm. This facility will have a research and training component which could have significant regional implications, particularly with respect to collaborative training and extension work.

The Ministry of Marine Resources is in the process of putting in place a national management regime for the cultured pearl industry. It is envisaged that the plan will, through discussions with those involved at all levels, lead to the acceptance of the basic concepts for a broad management plan which could then be tailored to meet the specific needs of each island.

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## Pearl Oyster surveys in the Marshall Islands

Freshly returned from his participation in the survey of pearl oyster resources in Christmas Island (see article this issue), Marshall Islands Fisheries Officer Ron Alfred carried out another survey, this time in Namorik atoll in his home country, and assisted by colleague Nena Kilma. The survey followed a request from the Namorik Island Council for help from the Marshall Islands Marine Resources Authority (MIMRA) in assessing the potential for pearl oyster culture activities there.

Pearl oysters have been reputed to be abundant in Namorik for some time, but no controlled assessments have previously been made. Some limited survey work was carried out by a Japanese team in 1984: as well as Namorik, this survey included the atolls of Ailinglaplap, Maloelap, Likiep, Mili and Arno. Namorik was the only one of the 6 atolls found to have shell in any abundance (during two of the four survey dives carried out, the numbers found were 34 and 10; during the other two, the divers noted that pearl shell were "abundant" or "sufficient"). The only other atolls where pearl oysters were found during the survey were Likiep (4 shell in a single dive) and Mili (1 shell in each of two dives, with some dead shell being noted). No shell were found at Arno, despite the fact that a small private pearl oyster farm now operates there.

Subsequent attempts by a Japanese company to negotiate a lease to farm pearl shell on Namorik came to nothing, mainly because agreement on the terms could not be reached with the islanders, who wanted to be more involved with the development of their own resources. It was in order to support this independent approach to development that the present survey was carried out, as a precursor to the development of culture activities.

A total of 28 4m x 100m belt transects were laid in the lagoon in depths down to 6m. The transects were searched by free-diving and all pearl oysters found inside them were measured (dorso-ventral shell length). A total of 148 oysters were found and measured. Average density inside the transect areas was 1.3/ 100 m<sup>2</sup>: extrapolation of this to the total area of the lagoon gives an estimated standing stock of some 520,000 oysters in the 40 km<sup>2</sup> lagoon. This can only be considered as a rough guess, however, since the area of actual pearl oyster habitat in the lagoon is not known. Nevertheless the contrast between the survey results from Namorik and from Kiritimati is clear. The culture options in Namorik appear to be good, and the next step is to start looking at these in more detail.

**Garry Preston**