Mother - of - Pearl Industry

In French Oceania

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MOTHER-OF-PEARL is obtained from the two valves of the pearl oyster known by the scientific name of *Pinctada margaritifera*. This *Pinctada* is the most highly prized for commercial purposes; it is, in fact, the largest in size and the thickest of those found in the Pacific with such colouring.

Average shells measure from 5.5 to 7 inches in diameter, without the horny outer edge, and both valves weigh between 1 lb. and 1 lb. 8 oz. Record weights of 18 and 20 lbs. have been reported in the case of very old shells taken from considerable depths.

Pearl oysters are distributed through many lagoons in French Oceania. Although the largest amounts of mother-of-pearl are extracted from a few rich lagoons in the Tuamotus and Gambiers (Hikueru-Takaroa-Takume - Mangareva-Marutea), quite considerable quantities are supplied from secondary lagoons in these groups and the Leeward Islands. The Windward Islands also possess some. There are apparently fairly dense populations in some of the Austral Islands (Raivavae, for instance). Finally, there is a small deposit of *Pinctada* at Nuku-Hiva in the Marquesas, despite the fact that there is no lagoon.

It appears they are to be found at depths of no more than 80 fathoms. They attach themselves to various supports (stones, dead coral, shells, etc.) with a byssus. The mollusc obtains food by filtration of plankton contained in the sea-water. During the breeding season, from October to February, the female and male adults deposit eggs and spermatozoa in the surrounding water, where fertilization takes place. The young embryo thus produced drifts with the current and is drawn down to the depths twenty or so days later. Provided it finds a surface to which it can attach itself, it is assured of survival and may develop to the adult stage. Muddy or sandy depths are unfavourable.

When a lagoon or part of a lagoon is opened for diving, the divers are required to travel to the spot even from other islands outside the group. They live in temporary villages established near the diving grounds. These communities, which sometimes accommodate as many as a thousand persons, are picturesque places comprising dwelling-houses, stores for purchase of mother-of-pearl, various shops, cinemas and areas reserved for religious observance. For many South Pacific peoples these villages provide the sole opportunity to taste of the delights of a number of modern facilities grouped in one spot;
Accompanied by an assistant, the diver travels to the diving place by canoe, frequently using an outboard motor. The canoe is anchored and the diver, wearing watertight goggles firmly covering his eyes, descends into the water with the help of a lead weight attached to the canoe by a rope. The mother-of-pearl shells are removed from the depths with his gloved hand and placed in a net receptacle, likewise attached to the craft. The diver uses one of the ropes for climbing back into the canoe.

The average time spent under water is from 1 minute 30 seconds to 1 minute 45 seconds; the finest divers from Pau-motu normally stay under more than 2 minutes at a time. The maximum depth reached is about 130 feet. Beyond this limit and as far as about 146 feet in depth, diving becomes something of a feat, achieved only by a small minority.

Apart from accidents during diving, there is also the risk of an occupational disease known as “Taravana”, likely to lead to relapse if the diver persists in his work. The sequellae of this disease are varying degrees of motor paralysis and psychic disturbances. The number of descents made in a day (one diver claims that thirty or so are his daily average, permitting sufficient recovery between dives and avoiding risk of over-tiredness) as well as the precautions taken, not only during working hours, but also in his daily life, play an important part in the occurrence of this disease.

Although it is possible by dint of intensive effort and personal risk for an experienced diver to obtain as much as 120 lbs. of shell, and in exceptional cases even more, an output of 80 lbs. in one day is considered good. During the first month of diving in 1957 at Takaroa and Takapoto, the average quantity of shell obtained per day per head was about 40 lbs. It should also be added that a diver rarely totals more than fifteen days' effective work in one month.

As for pearls, it is a piece of rare good fortune to find one. The sum obtained for it by the diver varies greatly.

The canoes used are of the standard type, with outriggers. As in these "low" islands there are no trees suitable for hollowing out, the canoes are built from planks. An outboard motor is often used for propulsion.

**Table:**

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<thead>
<tr>
<th>Year</th>
<th>Tonnage of Shell Exported (metric tons)</th>
<th>Total Value of Exports (Francs CFP)</th>
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<tbody>
<tr>
<td>1920</td>
<td>639</td>
<td>24,000,000</td>
</tr>
<tr>
<td>1930</td>
<td>321</td>
<td>37,000,000</td>
</tr>
<tr>
<td>1946</td>
<td>930</td>
<td>282,000,000</td>
</tr>
<tr>
<td>1956</td>
<td>539</td>
<td>658,000,000</td>
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* Francs CFP 178 = £stg1

Rates are usually lucrative for the diver. At the beginning of the 1955 season shell brought 75-80 francs per kilogram at the diving grounds. Prices range from 90-100 francs for the same period in 1957.

Unfortunately, this situation is threatened by de-population of the lagoons, as a consequence of both over-exploitation and the occurrence of...
Pearl-shell divers in French Oceania operate from outrigger canoes. Average time spent under water is from 1 minute 30 seconds to 1 minute 45 seconds. The finest divers from Pau-motu normally stay under more than two minutes.

natural phenomena. Measures for conservation include extension of the resting periods for lagoons, the establishment of reserve zones, restriction of the diving seasons, regulations prescribing the minimum size at which shells may be removed.

These measures are already effective—many for a long time. However, special arrangements are necessary for certain lagoons, and various technical surveys (oceanographical and biological) are still required.

With this in view, the investment fund for economic and social development of overseas territories has provided financial support for appointment of a biologist, who is to begin work this year.

In conclusion, mother-of-pearl shell has long represented a source of wealth for French Oceania. In the case of Pau-motu it is even the sole resource, apart from copra.

Many difficulties and hazards are involved in obtaining it. The pearl oysters found in Oceania possess qualities which are highly appreciated by the manufacturing industries, thus placing them in a most favourable position on the European market. The permanency of markets is dependent not only on the question of prices but also on close observation of strict grading regulations. Furthermore, much care must be taken in exploiting shell resources, facilitating breeding and multiplication of pinctada as far as possible as a means of safeguarding this heritage, threatened with gradual destruction.

SPC/WHO Health Education Training Course

As we go to press, trainees and instructors are gathering in Nouméa for the opening on July 1 of the Health Education Training Course, a joint undertaking by the South Pacific Commission and the World Health Organization. It will last eight weeks.

Taking part in the Course will be some forty trainees now assembling from all parts of the Pacific. Also attending will be an aborigine medical assistant from the Northern Territory of Australia, Mr. Phillip Roberts, and a medical assistant from Uganda, Mr. Sengendo Bagenda, who is studying health education in Manila under a WHO fellowship. The training staff will comprise specialist personnel from the World Health Organization and the South Pacific Commission, assisted by instructors representing different skills coming from various places abroad, including Australia, the Philippines and Guam.

The Course is the second of a series arranged by the Commission for training Pacific islanders in practical ways of helping their own peoples. The first was the Fisheries Training Course held under SPC/FAO auspices from November 19 to February 21.

While the need for a sound public knowledge of the principles and practice of healthy living is widely recognized, in most Pacific islands the main causes of death and disability actually stem from ignorance, and the South Pacific Commission believes that health education will do much to overcome this tragic lack of knowledge among islanders.

The next (October) QUARTERLY BULLETIN will carry a full story on the opening and progress of the Health Education Course.