
Recent beche-de-mer surveys in the Pacific Islands

A number of agencies have recently been involved in surveys of sea cucumber populations in various of the Pacific Islands. Mostly, these are aimed at assessing the potential for development of commercial beche-de-mer processing activities, given the present climate of high prices and consequent renewed interest in beche-de-mer production as a profitable cottage industry.

The University of Guam beche-de-mer team carried out surveys at four sites in Guam - Cocos Lagoon, Pago Bay, Apra Harbour and Tumon Bay - late in 1987. Three commercially important species - *Holothuria nobilis*, *Thelenota ananas* and *Actinopyga mauritiana* - were encountered in numbers considered adequate for commercial development. In Tumon Bay, catch per unit effort (cpue), expressed as number per diver per hour, was, for the three species noted, 24, 18 and 35 respectively.

In conjunction with the Truk Maritime Authority and the Truk Department of Marine Resources, the UOG team also carried out survey work at eight sites in Truk, Federated States of Micronesia, early in 1988. Truk has at least five commercially valuable species, as well as several others which may have commercial potential.

Elsewhere in FSM, the atolls of Ulithi and Ngulu, in Yap State, were surveyed by James Moore, Pius Pului, Kurt Jacobsen, and Florian Mareg, of the Yap Fishing Authority, in 1985. At Ulithi the survey focussed on *Holothuria nobilis*, and densities considered adequate to make commercial collecting worthwhile were found at 9 of 31 sites surveyed, with lower densities at a further 6 sites. At Ngulu, where the large size of the atoll meant that only a small part could be surveyed, some areas of reasonable *H. nobilis* density were found, but *Thelenota ananas* was seen in much greater abundance, and were thought to have more commercial potential. The survey team noted that the men of the island told them that sea cucumbers oc-

curred in much greater abundance in the northern part of the atoll, where surveying could not be carried out.

Research Officers David Zoutendyk, Ian Bertram, Kelvin Passfield and others of the Ministry of Marine Resources (MMR) in the Cook Islands have carried out beche-de-mer surveys on several islands in the group, including Rarotonga (a high island) and Aitutaki (a semi-atoll). Some beche-de-mer survey work was also done in connection with a general marine resource survey on Palmerston atoll, in late 1988, carried out jointly by MMR, SPC and the Forum Fisheries Agency. The only traditionally high-valued species found so far is *Holothuria nobilis*, and this is scarce, only being found at a few locations in deep reef passages around Rarotonga, and there only in low densities (typically less than one individual per 100 m²). Some *Thelenota ananas* have also been found in similar locations. The somewhat less valuable *Actinopyga mauritiana* was more abundant at all three locations and was considered to be the only species of any commercial potential in the Cook Islands. The highest density of this species, expressed as number of individuals per 100 m² of reef flat, was observed at Aitutaki, a value of about 14: densities at Palmerston were about 8 animals per 100m², and at Rarotonga about 4. Based on area estimates, standing stocks of this species at the three islands were estimated as 171 tonnes, 14 tonnes and 21 tonnes respectively. If the entire standing stock were harvested, it would yield an estimated 16 tonnes of dried product.

All these surveys have been written up in varying amounts of detail, mainly in informal documents that have not been widely circulated outside the country in which the survey was carried out.

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BIBLIOGRAPHIC REFERENCES ON BECHE-DE-MER

All the documents in the list below are catalogued in the Fisheries Information Projects beche-de-mer bibliographic database and are held either in the SPC library or in other collections known to us. Some are publications, but many are internal documents, mimeo reports and other forms of ephemera. In some cases we can provide single photocopies of references free of charge to SIG members or bona fide fisheries officers in Pacific Island countries. In other cases, where confidentiality requirements or copyright restrictions apply, we may be limited to advising enquirers of contact addresses through which they may be able to obtain the document in question.

If there are documents that you feel should be added to the database, please send us a copy, or, if this is not possible, a photocopy of the cover page. Documents do not need to be formal publications - many of those in the list are not - and we are keen to archive as much 'grey literature' - meaning internal reports, correspondence, unpublished data, etc - as possible.

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