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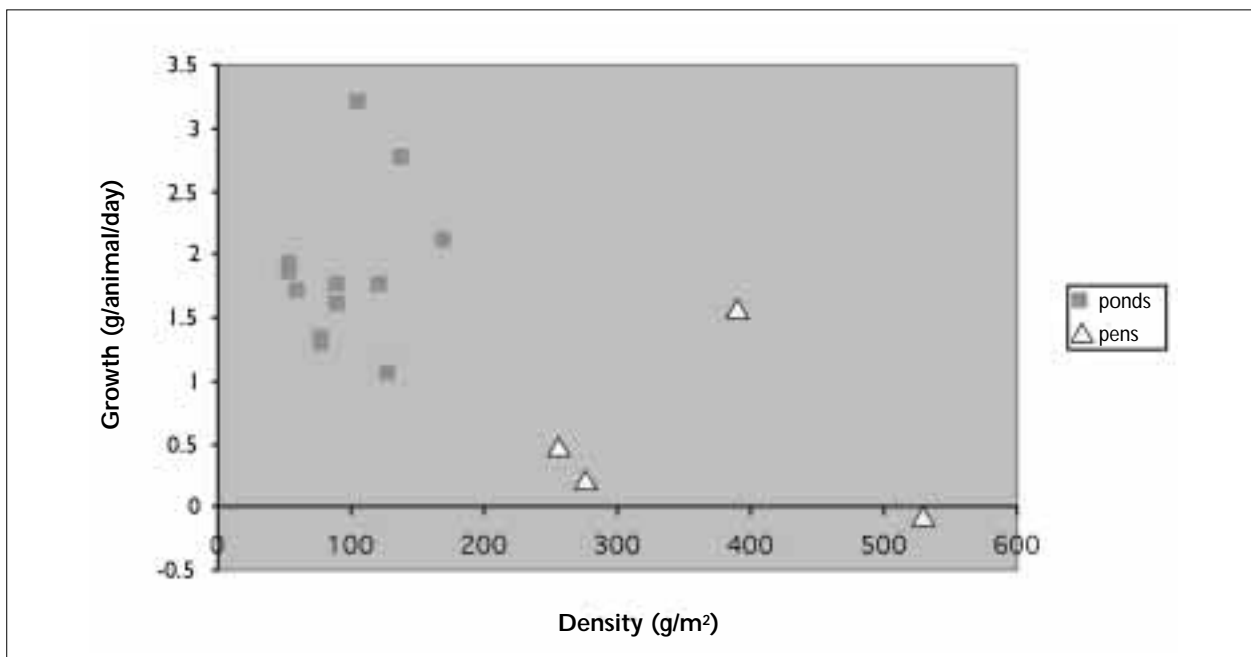


Figure 2. Density and growth of sandfish in ponds and pens

The new Marshall Islands Science Station inaugurates a sea cucumber aquaculture research programme

Jean-François Hamel^{1,2} and Annie Mercier^{1,2}

Iokwe!

The College of the Marshall Islands (CMI) initiated construction of a multi-disciplinary research station in January 2001, marking the embryonic phase of their research programme in aquaculture and stock enhancement. Like many Indo-Pacific nations, the Marshall Islands has been dealing with foreign interests in the exploitation of their holothurian resources and there is imminent danger of local over-exploitation of the most valuable

species. Among them, *Thelenota ananas* and *Holothuria nobilis*, which are easily harvested from shallow coastal waters. The new research program will consequently encompass holothurian aquaculture and restocking studies, as well as similar work on other marine creatures of commercial and ecological value. Additionally, the new facilities will foster marine science education and the development of a training and demonstration centre to promote awareness of marine resources preservation and management in the local communities.

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Initial funding for the project has been provided by the United States Department of Agriculture under the College of Micronesia Land Grant program and by the Marshall Islands Marine Resources Authority.

The new Marshall Island Science Station (MISS) is located in Arrak, about 35 kilometres west of Majuro Atoll's airport — and 50 kilometres from its commercial centre.

Despite its modest size, the station promises to be very functional. The aquaculture facilities already include outdoor concrete tanks for keeping the brood stock and growing the juveniles, concrete tables fit for smaller experimental designs, a nursery with PVC tanks and an algae room. All tanks can be provided with running seawater in a flow through system or maintained in a close-circulatory fashion, using a series of mechanical, biological and UV filters. Air is also distributed throughout the set up. The adjoining wet and dry labs give access to technical and scientific material such as microscopes, cameras, aquariums, an autoclave and a laminar flow bench.

Aside from the hatchery, outdoor tanks and laboratories, the 10 acres of land harbour lodging facilities, a kitchen/cafeteria, and offices equipped with computers and Internet access. The station will soon host installations for agricultural research as well.

The Marshall Islands are almost entirely composed of atoll formations, often so narrow that the road is the only barrier between the lagoon and the open ocean. The majority of the islands have an average elevation of 30 cm. In fact, land represents less than 0.1% of the country's total surface area, and is scattered across nearly 2 000 000 km² of ocean. With such figures, the importance of ocean studies and marine resources management becomes obvious. The population of about 60 000 depends chiefly on the sea for their economic development as well as for their survival. Restocking, stock enhancement, sustainable fisheries and coral reef preservation are key issues that the nation needs to address very seriously.

This is why the CMI has undertaken to educate the young generation, train the local entrepreneurs and lead them in the new millennium with a fresh way of dealing with their surrounding ocean. We are glad to be a part of this venture and can only hope that the new research station will receive a growing number of scientists and marine life enthusiasts. Hopefully, the program will encourage young and aspiring Marshall Islanders to become marine biologists and resource-conservation scientists. As for the sea cucumber project, it is scheduled to be fully operational in August 2001.

Kommol tata!

Sea cucumbers: farming, production and development of value added products

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In May 2000 the New Zealand government, through the Foundation for Research Science and Technology Top Achiever Doctoral Scholarship scheme, awarded funding to investigate the farming, production and development of value-added sea cucumber products.

The aim of this project is to provide an integrated approach to the study of the life history of the sea cucumber *Stichopus mollis* and its application to industry. One of the primary objectives is to develop hatchery techniques to produce enough larvae and juveniles to study characteristics of this animal's

life history in the larval period, post settlement and pre-recruitment period. These are areas that are well developed in theory but little understood in practice and limited to very few publications.

The next major objective is to ascertain the role of habitat and its relationship with distribution and abundance. Apart from research on the association of tropical reef habitats with sea cucumbers, little information exists on the demographics of temperate species. The idea is to create a habitat landscape to model the distribution and abundance of *S. mollis*.

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