

The idea for the pearl farm sprang from a failed attempt by the FSM government, through Marine Resources, to start a similar operation on the island in the late 1980s. Despite much expectation, the project only ever yielded about 300 pearls before it was abandoned in 1992.


In 1994, Fred made four trips to Pohnpei to get information about how to revive the project. Another Nukuoroan, Herman Herman, 38, who had been away from the island for 20 years and now held the job of assistant manager in one of Pohnpei's hardware stores, joined the crusade.

Together, they lobbied for funds and eventually secured financial help from the Pohnpei state government, the Australian government and their local island municipal government.

Finally, in March 1995, Herman gave up his hardware job and returned to Nukuoro. So did his former schoolmates, Enok Benjamin and Senand Leopold, who both worked for an oil company in Pohnpei.

With three other local men, they set about collecting the wild oysters, checking them, cleaning them and preparing them for seeding. They worked 10 1/2 hours a day, five days a week for US\$1.50 an hour paid out of island council funds. On 15 October 1995, Lyons left Pohnpei aboard the patrol boat, *FSS Micronesia*, together with Steve Lindsay, Virgil Alfred and Herman Herman. Lyons planned to remain for six weeks, seeding the existing oysters and laying plans for expansion.

When Lyons began pearl farming in the Cook Islands, he had to pay a Japanese pearl seeder two oysters for every shell he seeded. He had to give away 4,000 oysters. The next year, he paid an Australian to seed them. It was cheaper, but not cheap enough.

"After watching him, I thought: I could do that. Blow it! I'll learn," Lyons said. He did and now he is a role model. Is it any wonder, then, that Herman Herman, perhaps his keenest student, now says: "I know I can learn it too"? 

## Iranian research efforts

### Persian Gulf Molluscs Research Center

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Starting in 1982, attempts were made in Iran to develop pearl culture, and in this regard, some pearl culture farms have been established in different areas of the Persian Gulf. Systematic research on pearl oysters (*Pinctada margaritifera* and *Pinctada radiata*), however, was initiated five years ago in the Kish Island by Persian Gulf Molluscs Research Center (PGMRC). In order to expand the Center's facilities in Kish Island, the Center was temporarily transferred to Bandar Lengeh. At present it operates with a staff of 30, among which are eight research personnel undertaking research activities.

PGMRC consists of three departments, namely biology, aquaculture and oceanography. The objectives of the Center concerning pearl oyster are to achieve the following:

- Pearl oyster stock assessment;
- Culture and farming of pearl oysters; and

- Providing solution and assistance to problems raised by private enterprise.

The department of biology is carrying out some major studies related to the biology and ecology of local pearl-oyster populations, which are critical to any culture plans. The most important activity in this department is determining the extent and status of natural stocks of pearl oysters, including abundance and oyster-size distribution and density. Biometry and growth, age determination, reproductive cycle and diets of pearl oysters are also being investigated at this department.

Application of current techniques in culture and farming of pearl oysters, as well as enrichment of natural stocks, are one of the principal objectives here at PGMRC. In this regard, the department of aquaculture is carrying out research activities both at indoor laboratories and also by establishing farms in various locations in the Persian Gulf. Research

activities include induction of gonadal maturation and spawning fertilisation, larval rearing and spat production as well as plankton culture for feeding.

In this regard, with the financial assistance of the Iranina Fisheries Research and Training Organization, a pearl oyster hatchery will be established in 1995 at Farour Island with the aim of producing pearl oyster spat on a commercial scale.

There are some research projects in this department entitled:

- Production of *P. margaritifera* spat from hatchery-reared larvae;
- The spatial and temporal variation of intensity of spat settlement to artificial collectors of different materials, placed at different depths;
- Pearl cultivation; and

- Site selection for pearl farming in Booshehr province.

As a branch of this department, the disease unit works on development of diagnostic methods, and currently its activity is focused on identification and controlling of fouling and boring organisms in the pearl oysters.

The department of oceanography provides basic information about the physico-chemical nature of water in different areas of the Gulf. Identification of pollution sources and their effects on pearl oyster, characteristics of pearl oyster habitats and locating stations for long term bio-monitoring programmes are also under this department.

One research project has been conducted, entitled:

- Effects of crude oil on the pearl oyster *Pinctada radiata*.



## Fouling organisms

The project on infection of pearl oysters was carried out by Dr Mehdi Saveh Doroudi, in the Persian Gulf Molluscs Fisheries Research Center in Bandar Lengeh from 1992 through 1993. In this study, infection of pearl oysters in the culture ponds and natural habitats was investigated. Also, the relationship between cleaning intervals of oysters and growth rate was surveyed.

The main fouling organisms in the culture ponds were found to be barnacles, spat of edible oysters, and Tobiculous polychaete.

In the natural habitats, fouling organisms invading the oysters belonged to Sponges, Algae and Ascidians. *Cliona carpenteri*, *C. margaritifera* and *C. vastifica* of the boring sponges, and *Lithophaga*

*malaccana* and *L. hanlyana* of the boring mussel caused the most damage to the oyster shells.

Amongst the oyster species studied, *Pinctada margaritifera* showed the greatest extent of infection with fouling organisms. Based on the acquired results, it can be said that the high rate of mortality among *Pinctada radiata* is related to the attack of predators cited above.

Dr Doroudi took part in the First International Conference of Pearl Oyster held in Honolulu from 12-15 May 1994 and presented the results of his study to the gathering.

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## Oman Sea Fisheries Research Center

E. Kamrani, Head of Stock Assessment, P.O. Box 1597, Bandar Abbas, IRAN. (Phone: (0761) 29365, 29444, 21134), writes:

I am presently involved in a research project on stock assessment and population dynamics of pearl-oyster beds of the Iranian Coast in the Persian Gulf. I have succeeded in collecting some

literature on this subject, but unfortunately, the related references and literature are rare. Since all the literature on this subject in our libraries and elsewhere has not been computerised, it has not