

Akoya Research in NSW

by Dr Wayne O'Conner¹

In July 1998, researchers at NSW Fisheries, Port Stephens Research Centre began investigations into the possibility of establishing a pearl industry in Port Stephens, an industry based on the Akoya pearl oyster, *Pinctada imbricata*.

Interest in the possibility of farming Akoya oysters in NSW has been shown for several years. However, extensive surveys of the NSW coast indicated that there were insufficient oysters to permit gathering from the wild. To overcome the shortage of oysters and to commence trial farming, NSW Fisheries signed a memorandum of understanding with a pearl farming company 'Australian Radiata', who have a wealth of farming experience in both Australia and Japan.

Port Stephens, 200 km north of Sydney, was chosen for farming because it is among the best waterways in Australia for temperate shellfish farming owing to its fortunate combination of a suitable temperature range, lack of pollution, and expanse of sheltered, well-flushed and relatively deep waters. Further, Port Stephens offered the facilities of NSW Fisheries, Port Stephens Research Centre, with its extensive experience in the production of new aquaculture species.

Together, scientists from NSW Fisheries and representatives of Australian Radiata devised a research programme with three major goals: first, to elucidate the biology of the Akoya oyster in NSW, focusing in particular on species distribution,

growth rates in NSW estuaries and reproductive biology; second, to establish techniques for reliable hatchery production of spat in NSW to preclude the need for collecting oysters from the wild; finally, to construct experimental farms in Port Stephens so that the viability of farming can be tested and any potential environmental impacts can be assessed.

Within a year of the programme's inception, work is well under way. Four experimental leases with a total area of 28 ha have been obtained to allow farming in different areas of Port Stephens. Oysters have been deployed at these sites so that growth and survival can be monitored. Sampling to follow growth and reproduction in the wild Akoya population has been underway for 11 months and settlement collectors have been deployed in order that natural recruitment can be followed. In the hatchery, oysters have been brought into reproductive condition and induced to spawn. More than 2.5 million spat have been produced, enabling farming trials to begin.

Spat growth has been encouraging; the first oysters are expected to be large enough to allow pearl-nuclei implantation by the end of this year (1999). The quality of pearls produced will then be assessed in the hope that Port Stephens could become the centre of an Australian Akoya pearl industry, an industry that has a low environmental impact and complements other existing industries such as tourism.



Black Pearls of Micronesia: first pearl harvest, farm expansion plans to include additional local partners

Virgil Alfred, Farm Manager for Black Pearls of Micronesia Inc., reports that the company is looking to expand its activities in the Marshall Islands. Over the last few years of expansion on the farm, Virgil and his crew have been able to adapt the established pearl farming techniques to Republic of Marshall Islands conditions, and have trained over 15 Marshallese workers in the basics of pearl farming.

The company is now looking to set up joint-venture arrangements with local partner farms. Dr Dale Sarver, BPOM President said that the company's plans had always been not just to get their own operation up and running, but to also show the way for others to participate in this potentially lucrative industry in the RMI. 'As well as expanding BPOM's own "nucleus" farm', he said, 'we

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