

Amwing Pearl Producers Association Industry Workshop, Perth, 1999

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In recent years the development of the Amwing¹ pearl oyster industry in Western Australia (WA) has been impressive, with 19 licences issued by Fisheries WA since 1995. This rapid expansion has seen a genuine desire by industry to understanding and discuss research findings, market information and government policy to aid the growth of the industry.

Over 50 delegates, representing all industry sectors, attended the annual Amwing workshop held on 30 and 31 October 1999 at the Underwater World Function Centre, Perth. The workshop hosted key international and interstate speakers, with the assistance of the Aquaculture Development Council, Aquaculture Council of WA, Fisheries WA and industry sponsors² and addressed the theme of "From Farm To Market Place."

The participants enjoyed Neil Sims' erudite and humorous keynote address "Boot-strapping beyond Tahiti" where he likened the global pearl industry to ocean-going vessels. He took the participants on a nautical journey of the waters charted by the brilliant ship *SS Tahiti*, with her inherent natural benefits and allure. Contrasting her to the work in progress in the seas being chartered by the frigates *Hawaii*, *Central Pacific*, *Western Pacific* and *Western Australia*, and highlighting the vagaries of uncharted waters, with their pirates of biological and cultural constraints.

Symantha Suprain, of Percy and Marks, a 100 year Sydney-based jewel retailer specialising in Australian diamonds and pearls, encouraged participants with her great enthusiasm for the unique colours she saw in a selection of Western Australian Amwing pearl shell. She commented on increasing consumer awareness of pearls and pearl quality stating that a "distinct 'point of difference' will be critical to creating demand and sales at the shop front".

Prior to lunch the participants revelled in Rocky de Nys' presentation on the potential cost savings by using anti-biofoulants paints developed by the Centre for Marine Biofouling & Bio-Innovation Tasmanian Aquaculture and Fisheries Institute. Amwing members eagerly await the results of trials currently being conducted in the *Pinctada maxima* industry, particularly with respect to pearl quality.

In the remainder of day one, other speakers addressed pearl oyster shell management research and practices. Kim Friedman outlined the results of seeding trials of black pearl oyster in the Solomon Islands by the International Centre for Living Aquatic Resources Management (ICLARM) and Australian Centre for International Agriculture Research (ACIAR), highlighting critical factors to optimise resultant pearl quality. This presentation was complemented, in part, by Dan Machin's video presentation on optimal pearl oyster condition. Paul Southgate, ACIAR project leader, provided an excellent update on ACIAR funded research into hatchery techniques for black and wingshell pearl oysters. Prof John Lucas, covered research he and Dr John Norton had undertaken to improve culture pearl formation by the utilisation of standard veterinary practices. This highlighted Rick Scoones' point (on day two) that only scientific experiments can determine improvement in pearl oyster management practices – as common sense does not always prevail.

In the afternoon session, Damien Bell provided an excellent account of key farm management practices on South Sea pearl oysters, *P. maxima*, and Alan Pearce outlined CSIRO's research on the Leeuwin current and the Southern Oscillation Index and its effects on weather, oceanographic and fisheries events off the WA coast.

Day two commenced with business management sessions. Bob Galloway, Small Business Develop-

1. "Amwing" is an amalgam of the three key pearl oyster species *Pinctada albina*, *P. margaritifera* and wing shell (*Pteria penguin*) cultivated by the association members.
2. Architectural Heritage, Australian Commercial Marine, Australian Netmakers Pty Ltd, Aquafarm Management Systems, Environmental Moorings Australia Pty Ltd, Fish Unlimited Pty Ltd, Jeyco (1992) Co., Kingswood Marine Pty Ltd, Netcraft Pty Ltd, Orca Marine Supplies Pty Ltd, Paragon Pearling Pty Ltd, Pearl Wholesalers Australia Pty Ltd, Perth Scientific Equipment, QE Marine & Rural Supplies Pty Ltd.

ment Corporation, highlighted the importance of “knowing thy business” by thorough business planning. Bob stating that “Only then will proper business decisions be made, based on maximising profit and reducing loss.” This was also a point highlighted by the economic model (version 1) presented by Bill Johnston and Peter Rawlinson who identified the three key cost centres of technicians, labour and capital depreciation, accounting for greater 65 per cent of the production costs (based on a 50 000 shell farm).

Overall, the two-day workshop was regarded as a success, aided by the conducive atmosphere of the

Underwater World Function Centre and the sponsor’s trade show. Day two’s open session derived many key outcomes for the Amwing Association to pursue in 2000, particularly in the area of strategic branding and marketing.

Copies of workshop abstracts are available from: Simon Bennison, Executive Officer, Amwing Pearl Producers Association Inc., tel. 9244 2933 fax. 9244 2934 or Dan Machin, Fisheries WA, tel: 08 9482 7201 fax: 9482 7390.



Evaluation of success in the seeding of round nuclei in *Pteria sterna* (Gould 1851), a new species in pearl culture

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Introduction

The Mexican pearl fisheries of the rainbow-lipped pearl oyster (*Pteria sterna*) have existed since before the arrival of the Spaniards to the American continent. Evidence of the use of ornaments made from these shells was found deposited in an ancient burial site – probably belonging to the indigenous Seri Indian nation – in the coastal part of the State of Sonora. It is very common to find pieces of this shell in ancient shell hills (*concheros*) related to the presence of semi-nomadic groups that roamed most of the central coast of Sonora, before the arrival of Western civilisation. After this incipient use of pearl beds, much larger efforts were given to the pearl fisheries of the Sea of Cortez (*aka* Gulf of California), from the start of the Colonial period until 1940. These fisheries gave abundant supplies of naturally coloured pearls, from light-grey to dark-purple, with many intermediate tones of pink, gold and green.

The rainbow-lipped pearl oyster populations, as has been the case of all commercial species of pearl oyster, suffered severely from over-exhaustion. The Mexican Government was forced to decree in 1940 a permanent ban on its fishery that still holds to this day.

Historical background

Over the past few decades, several Asian-Pacific rim countries have used a species of the same

genus (*Pteria penguin*) for the culture of half-pearls. The general belief of Japanese specialists is that round pearl production in pearl oysters of the genus *Pteria* is technically difficult. Shirai (1981a) mentions “most of the genus *Pteria* are too small. Also they have a wing-shaped shell, which makes the entire operation rather difficult”. The same author states, referring to *Pteria penguin*: “the extraordinary luster of the shell’s interior has invited many to try and produce round pearls but, at the moment, not any effort has been rewarded with success” (Shirai 1981b). Monteforte (1997) reports on the results of seeding both species of pearl oysters (*Pinctada mazatlanica* and *Pteria sterna*) and mentions that – when compared with *Pinctada mazatlanica* – “*Pteria sterna*, on the contrary, presents anatomical difficulties for round pearl production, because the pearl sac is very wide at its base and the graft moves freely...”

There is one commercial pearl farm in Mexico that utilises *Pteria sterna* as its main production species. The farm has been able to produce cultured half-pearls and loose pearls on a regular basis (McLaurin et al. 1997; McLaurin et al. 1999; <http://www.perlas.com.mx>).

The present article analyses the “seeding operation” costs and the number of pearl oysters needed for the implementation of the round pearl seeding technique on *Pteria sterna* at the commercial first modern Mexican pearl farm, ITESM/Perlas de Guaymas.