

# 15<sup>TH</sup> INTERNATIONAL PECTINID WORKSHOP

## FINAL REPORT



FRDC PROJECT 2004/305



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## NON-TECHNICAL SUMMARY

Approximately 100 people from 15 countries attended the 15<sup>th</sup> International Pectinid Workshop, held at Mooloolaba between April 20 and April 26, 2005.

The International Pectinid Workshops are biannual events run under an independent organisational structure (below, in BACKGROUND). One great advantage of this structure is the organising committee is free to select whatever program it chooses. Some of the past Workshops have generated fairly academic programs, reflecting the background of the organisers. We chose to develop a program with a more commercial focus on management of scallop fisheries, particularly through spatial management concepts, and on culture of scallops. To that end, we asked Russell Mincher, CEO of New Zealand's Challenger Scallop Enhancement and Fisheries Management Companies, to act as the Workshop's keynote speaker. The Challenger Organiser administers a substantial scallop fishery and enhancement organisation, and is a leading entity in the newly developing field of private enterprise-administered fisheries. Professor Sandra Shumway presented a second keynote address, on the topic of toxic dinoflagellates and biohazards from shellfish, including scallops. This is an issue of major social and economic consequence in many parts of the world. Australia has been desperately lucky in that shellfisheries have suffered minimal impact from toxic algal blooms. These fisheries, however, are at risk both from imported algal species and / or mutations of indigenous forms. Professor Shumway's address was a wake up call on the subject.

The remainder of the Workshop featured a one and a half day session on scallop fisheries, management, spatial management and bycatch issues, a shortened day on general biology and economics and a full day on culture issues.

The Workshop was attended by all members of the Bass Strait Scallop Management Advisory Committee and its associated assessment group, and representatives from the two commercial entities presently attempting to culture saucer scallops in Queensland and Western Australia. While it is too early to evaluate the value and consequences for these attendees, it was obvious during the course of the meeting that good progress was being made in terms of building networks, accessing new information and in the case of the two companies working on scallop culture in Australia, improving working relationships.

Time will tell how valuable the Workshop's papers and contacts will be to attendees.

## BACKGROUND

The International Pectinid Workshops are a conference series aimed at exchanging information on the biology, culture, management and economics of scallops. The series, which has now been running since 1975, moves from country to country in a random manner – the four Workshops held prior to Mooloolaba have been held in the United States (Florida), Chile, Norway and Mexico. The Workshops are unique in that they have no governing body, professional affiliation or organisational structure. Rather, an individual with a history of scallop research and conference organisation is asked to arrange the event on a stand-alone basis. This involves forming an organising committee, budgeting, raising funds for the event, identifying and booking

a venue, developing a program and undertaking all of the minutia involved in running a scientific conference and associated social program. Despite this apparently chaotic structure (or perhaps because of it), the Workshops work extremely well. They have created a close-knit network of shellfish scientists, generated a number of international collaborations on scallop culture, disease management and the like, and have been the origin of important texts on scallops, including Sandra Shumway's standard text "Scallops, Biology, Ecology and Aquaculture".

Australia was selected as the venue for the 2005 Workshop during the 2001 Workshop, in Chile.

## NEED

There is considerable impetus and interest in the revival of scallop fisheries and the development of scallop aquaculture in Australia at this time.

The Bass Strait, Victorian and Tasmanian (*Pecten*) scallop fisheries, which were among Australia's most productive and profitable fisheries in the 1960s and 1970s, declined markedly in the 80s and all but collapsed in the 1990s. The stock (or stocks) are showing signs of slow recovery. The saucer scallop (*Amusium*) fisheries in Queensland and Western Australia have generally been more stable, although recruitment in some areas of Western Australia has shown intermittent but marked spikes in some years. The Queensland fishery has suffered what is hopefully a short-term decline, probably as a consequence of changes in management arrangements rather than declining population abundance. At the same time, many international fisheries are recovering after stock declines or collapse. New assessments based upon spatial data and models are evolving and demonstrating the value of alternative management strategies, based on spatial structures and / or rotational harvesting, for such fisheries. This is a global phenomenon best seen in recent Canadian and U.S. population modeling for scallops.

Three substantial sea ranching and culture ventures have developed in WA, Queensland and Victoria since 2000. All are linked to or have used FRDC project 2000/190, 'Feasibility of scallop enhancement and culture in Australian waters' and other FRDC projects. Scallop aquaculture is growing rapidly in Asia and is generating interest and investment across the globe. Associated culture technology is also increasing.

2005 was an opportune time for Australian fisheries managers, industry participants, scientists and people involved in scallop culture to learn and share information about scallop fisheries, assessment and aquaculture. Such an opportunity existed via an international scallop workshop that covered aspects of scallop biology, ecology, fisheries, aquaculture and economics. The 15<sup>th</sup> International Pectinid Workshop, held in Mooloolaba in April 2005, was an informal, interactive and highly informative forum. These Workshops attract a wide range of nationalities and expertise and are unique in the breadth of experience available to participants.

## OBJECTIVES

To support the dissemination of international knowledge and experience on scallop biology, fisheries, aquaculture, economics and related topics to industry and government, through support for the 15<sup>th</sup> International Pectinid Workshop.

## METHODS

The original project application gave a methodology of

*" The program and organisation of the 15<sup>th</sup> International Pectinid Workshop will be guided by a steering committee that has membership around Australia. It currently includes the PI (Secretary-Treasurer), Co-Investigator (Communications), Peter Young (Ex CSIRO, Chair), Lindsay Joll (WA Fisheries), Noel Coleman (Victorian Fisheries) and Mike Heasman (NSW Fisheries).*

*Workshop organisation is fairly straightforward, if demanding of time and patience. The PI and Co-Investigator have developed a Workshop budget and planning time table. There will be an initial call for papers (with abstracts) through various professional societies and networks, including the full mailing list from the last two International Pectinid Workshops, in early 2004. We will develop a net-based communication site using the University of Sunshine Coast as a hub, undertake follow-up calls and letters, arrange the conference program and associated social functions, undertake a second and final call for attendance in mid and late 2004, print abstracts and programs in early 2005, arrange travel and accommodation for some attendees, play at being mother for a fortnight, then collapse. We will not be using a professional conference organizing facility. The Workshop is of a size and character that can be handled by experienced amateurs, and the PI has agreed to take on the organizing function as a semi-retirement task.*

*Developing a strong and relevant program with good speakers, good keynote addresses and relevant workshops takes time and effort. We intend making considerable effort in getting strong Asian involvement, particularly from China and Japan, which have the world's largest scallop culture and fisheries operations at this time. Attendance from these nations has not been a strong characteristic of earlier Workshops. We also expect strong industry involvement, with indicative support from McBoats (WA), Queensland Sea Scallops (Qld), Challenger (New Zealand) and Shellfish Culture (Tasmania). We expect this list to grow, particularly through involvement of the catching, processing and marketing sectors. Workshops have traditionally given strong support to students and we will follow this tradition by offering cheap registration and giving student awards. The Workshop program will be strongly influenced by the requirement of participants. We are already committed to an Economics Section and will encourage a Hatchery Technology Section and associated workshop. There should be scope for an International Marketing Section, subject to there being sufficient industry interest. There will be ample scope for interest groups with specific needs to promote the need for workshops on their chosen topics. "*

This process was followed fairly closely. A website and electronic registration procedure was set up in October 2004 – a little later than planned, but not late enough to affect registrations. Establishment of electronic banking took a surprising amount of time and energy – it was obvious that banks had some problems with short-term accounts and working with unincorporated associations. We carried out almost all calls for attendance and registration electronically, using mail-out lists from past workshops and personal contacts. In hindsight, we may have had improved attendance by advertising in a wider range of professional society magazines than was the case (we used three or four) and greater use of physical flyers, particularly to Universities. It was noticeable (and disappointing) that not one person from a mainland Australian University attended the Workshop, and there was no attendance at all from South East Asia, which had been a specific target for the organizers. The reasons for this are not clear, although professional networks in the scallop world have never been as strong in South East Asia as they are through the rest of the world. Likewise, attendance from the United Kingdom and France, which has traditionally been strong, was disappointing. This appears to have been a consequence of time and cost, coupled to the cessation of a major French project on scallop culture. The entire Bass Strait Scallop MAC attended the first 2 \_ days of the Workshop, which was structured to address fisheries and fisheries management issues for their benefit. Principals and some of the operating staff from the two Australian companies establishing marine ranches for saucer scallops also attended, which was gratifying and should have been of considerable use to both organizations.

Winding up of the Workshop is almost complete. The Workshop was originally budgeted to cost approximately \$65,000, with funding sources split 50:50 between sponsors and registration. While there is some final adjustment and settlement of the Workshop books to be completed, it appears that this budget was realistic. We raised approximately \$33,000 from sponsorship (plus a considerable amount of in-kind support, particularly from the University of the Sunshine Coast) and \$26,000 from registrations. Total Workshop expenses will come in at approximately \$53,000, giving us a surplus in the order of \$6,000. Reasons for the under-budget largely revolve around the generous support given by the University of the Sunshine Coast, free support from family members and the slightly under-budget number of registrations we received. The Organising Committee plans to allocate some of the surplus to organisers of the 16<sup>th</sup> Pectinid Workshop. The remainder will be parked with the Australian Society for Fish Biology in trust, to be used as seed funding for any workshop or conference on scallops that is held in Australia within a defined time. All reports required by funding bodies have been written and accepted.

## RESULTS/DISCUSSION

The Workshop attracted about 100 people all inclusive, from 15 countries, which was a little down from our projected 120 attendees. A total of 34 oral presentations were delivered, and approximately 30 posters were presented for viewing. Copies of the program and extended abstracts are appended to this report. The program gave considerable attention to spatial management in scallop fisheries and culture systems, particularly those involving hatchery systems. Two open forum discussions, on 'Managing scallop fisheries to detect signals for spatial management' and 'Can scallop ranching be viable if hatchery-reared spat is needed' attracted some

interesting, albeit attenuated, discussion from forum panelists and the floor. The Workshop featured a strong social program. It has been the experience of members of the Organising Committee that as much work and network building is done during the social gatherings of these Workshops as is done in formal sessions – this was certainly the feedback we received from participants during this event.

Russell Mincher's keynote presentation, which focused as much on non-government management of fisheries as it did on enhancement, covered new ground for many participants, especially those from academic institutes, and created considerable interest among Australian fisheries managers. Sandra Shumway's address on dinoflagellate-based biotoxins was a healthy wakeup call, particularly to Australian attendees, who have little knowledge of the seriousness of this problem. Professor Shumway has an encyclopedic knowledge of the field, and her ability to give a global picture of biotoxins issues in shellfish is unsurpassable.

It is clear that recent U.S. and Canadian experiments with large scale spatial management are achieving considerable success. This is a positive signal for managers of the Tasmanian, Bass Strait and Queensland fisheries, who are attempting to rebuild apparently over-fished populations using a range of spatial management procedures. An interesting and somewhat quirky series of papers describing the rebuilding of a Florida (U.S.) recreational fishery for scallops using hatchery technology created some interest, particularly the detailed economic evaluation of the consequence of this restocking program.

Papers presented on culture and marine ranching of scallops gave a mixed and somewhat incomplete picture of what is happening on a global basis. The economic viability of some projects (particularly those in cold water, and where labor costs are high) must be questionable. It is an interesting comment on the business focus of such operations is that there appear to be few reasonable feasibility studies or economic evaluations of marine culture programs.

The fairly commercial nature of the program appeared to be well received by most attendees, there were no significant glitches during the event (not a single audio-visual problem – a first in a conference in which an appreciable proportion of presenters didn't have English as a first language) and the organization's wind-up is proceeding smoothly.

## BENEFITS AND ADOPTION

It is all but impossible to anticipate or evaluate the benefits, consequences and outcomes of focused forums such as the 15<sup>th</sup> International Pectinid Workshop. Potential outcomes and benefits for Australian participants include:

- Improved collaboration between McBoats / Elmwood Holdings, the Western Australian company involved in scallop ranching out of Geraldton, and Queensland Sea Scallops, their counterparts in Hervey Bay, Queensland. The two companies have had little contact in the past. The Workshop effectively created a meeting ground and focus for improved

collaboration. The two groups participated in a 2 hour steering committee meeting and appear to be working far better together now.

- Members of the Bass Strait MAC and Assessment Group have now participated in a serious international meeting. This will enable them to put their own fishery into the context of world fisheries, and see how other fisheries are managed.
- A number of Australian scientists have been introduced into a long-standing and valuable professional network that extends around the globe. The value of this network cannot be underestimated – it includes very diverse expertise, vast experience in shellfish biology and links to academic and other research institutes around the world.
- There is some interest among American and Canadian scientists in taking some form of Sabbatical leave in Australia, (particularly in Queensland,) as a consequence of the meeting and its associated contacts.

What the Workshop delivers in terms of scientific programs, collaborations and actual dollar value cannot and will not be evaluated within the next two years.

Summaries of the Workshop's proceedings will be made available to trade magazines and industry publications. The Abstracts have already been circulated on an international conference abstracts / papers site (CAB International, based in the United Kingdom).

## FURTHER DEVELOPMENT

The 16<sup>th</sup> International Pectinid Workshop will be held in Halifax, Nova Scotia, in May 2007. The present Workshop has given Australian attendees the opportunity to develop networks with U.S. and Canadian counterparts in the field of population modelling. They should hopefully be able to further evaluate the success or otherwise of existing management arrangements in Australian scallop fisheries in collaboration and present findings at the 16<sup>th</sup> Workshop. Likewise, those involved in culture of scallops in Australia will be able to work with their counterparts in Norway, New Zealand, Mexico and Spain, in terms of improving hatchery and field monitoring procedures. Maintenance of the contacts they have established during this meeting at the 16<sup>th</sup> International Pectinid Workshop will enable them to identify new developments in hatchery technology and scallop culture.

## CONCLUSION

The 15<sup>th</sup> International Pectinid Workshop was completed without incident, and meeting most of the milestones and expectations of the Workshop's organizers. Feedback from participants has been enthusiastic, and we believe the Workshop was successful in terms of allowing Australian fisheries managers, scientists and those involved in aquaculture to obtain a broader knowledge on topics about scallop culture, biology and management. Copies of photos and e-mails now circulating indicate that a many new professional contacts and friendships have been made.



The investment of approximately \$60,000 and a considerable amount of time and energy should be well worth while in terms of better managed fisheries, improved understanding of scallop culture and an introduction to non-government / co-management of fisheries.