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Advertising deadline for the next issue: 15 May 2013

For advertising in Fishing Today contact Mary Brewer at TSIC on 03 6224 2332
Once again we celebrate an extremely successful and well organised Australian Wooden Boat Festival, with large numbers attending over the bi-annual event. Continuing to gain world wide exposure, this event brings a major economical benefit to our State. Kudos must go to the event organisers for providing a display of the many and varied faces of our seafood industry. The official opening of the Seafarers Memorial Wall, along with the release of Garry Kerr’s latest video, were also part of what was truly a fantastic display of our maritime history. TSIC staff continue to contribute their time for this event and we say well done to Julian Harrington and his team.

Regulation is, and should be, embraced in the spirit in which it is intended. As we struggle to keep abreast of the ever-changing dynamics in, but not exclusive to, the seafood industry we need to address the bureaucracy that is overtaking us all. Creating undue imposts on all industries is having critical impacts on the viability of many sectors, both large and small, and the accountability is nothing but costly and onerous. ‘Best practice’ is the catch cry for all well-managed businesses these days and the seafood industry welcomes the challenge and the opportunity to be proactive in this regard. During the past 20 years, fishers have had to embrace change out of necessity and what was not considered high priority at the time has now become the norm. We are becoming immersed in regulations that not only belie belief, but have created a state whereby commencing a new business, expanding, or just plain owning and operating a business, is becoming increasingly more difficult. The rumblings from our industry members and the wider community will hopefully generate a common sense approach that will endure with viable results. Continuing to allow this bureaucracy imbalance will not achieve the best results for fishers.

On a more positive note, the re-opening of our fisheries on the East Coast is welcome news. To all those involved well done, in particular I mention here the contribution from Alison Turnbull.

The TSIC Board elections have been held, with new members being notified by the Tasmanian Electoral Commission. They are Phil Lamb, Jon Poke, Paul Richardson and David Whyte. We congratulate and welcome these new members to the Board and look forward to robust and healthy growth. For a full list of board members, refer to the front cover of Fishing Today. Our next Board Meeting and Annual General Meeting will address the election of formal office bearers, and you will be advised of those outcomes.

In closing, it would be remiss of me not to mention the outstanding contribution of Board members who did not seek re-election. Our sincere thanks are extended to Sam Ibbott, Odette Lennane and Linda Sams. They brought professional and forward thinking to the Board, were not frightened to think outside the square, and were focused on healthy and productive pathways for the Board. We wish them the very best of success in their extremely busy lives.

Lindsay Newman  
President

Update on the national maritime safety system

Marine and Safety Tasmania (MAST) has been informed that the commencement date of the national system will be delayed until at least July 2013. The Australian Maritime Safety Authority (AMSA) has advised that an announcement of the new start date will be made during March 2013. MAST will hold information sessions around the State during early May 2013, to assist commercial vessel owners and operators to understand the national maritime safety system in more detail. Please watch out for dates, times and venues for these information sessions, or if you are attending Agfest, visit the MAST site for a one-on-one discussion with MAST staff.

Specific questions regarding the development and content of the national maritime safety system, can be directed to AMSA by phoning 1300 517 246 or you may contact Gwyn Alway at MAST.
The 2013 Australian Wooden Boat Festival was held from 8 to 11 February, and by all accounts the event was a huge success, with an estimate of more than 200,000 visitors attending over the four days. TSIC played a significant role at this year’s festival, organising what was known as the ‘Fishermen’s Village’. The display focussed on the history of the seafood industry and included a number of informative banners and a range of old photos and video presentations.


IMAS and the AMC also utilised some of the ‘Fishermen’s Village’ space, to promote the world leading science and education that supports our fisheries and fisheries management. A huge highlight for children and adults alike was the aquarium with live rock lobsters, crabs and periwinkles. Thanks to Mike Porteus and Emily Ogier from IMAS for organising this component of the display.

A TV screen was used to present a looping series of videos on the history of the Tasmanian seafood industry. This included audio snippets from TSIC’s ‘Oral history of the Tasmanian seafood industry’ interviews, as well as old video footage of scalloping in the D’Entrecasteaux, couta fishing in Storm Bay and cray fishing in Tasmania. The audio snippets from the TSIC oral history project can be found on the TSIC web site at http://www.tsic.org.au/index.php?target=project3.

A range of fishing equipment, shells and other artefacts was also on display. These included fishing boat half models made by Bernard Wilson of Triabunna. Bernard would use the half models as the foundation for building many fishing boats. Information about the Wilsons, the boats they built and how they were built was also on display. This information was collated by Clive Perryman as part of the 2011 boat festival. A huge thanks to Clive for providing this information and a number of artefacts and fishing gear; Bernard Wilson for lending us his beautiful half models; and to Mary Brewer from the TSIC office for providing her old scallop dredge and other fishing artefacts.

The organisers of the Australian Wooden Boat Festival also provided a stage area and seating, which allowed TSIC to organise a series of seafood industry-related presentations. Talks included: Clive Perryman talking about wooden boat builders of Triabunna; Des Whayman telling tales about his life of fishing and marine farming; and David Whyte from Huon Aquaculture, who talked about the Tasmanian salmon industry success story. It was standing room only when Garry Kerr, a well-known fisher and producer of many DVDs, utilised the space to launch the latest addition to his DVD collection “Crayfishing around Tasmania: a fisherman’s perspective”. A huge thanks also to Caleb Gardner from IMAS, Bruce Stannard, Alicia Perry from the AMC, Greta Pecl from IMAS and local fisher Dave Wyatt, for their presentations during the festival.

So how did the display go? Well to put it simply, it was fantastic. For the majority of the four day festival there was at least 20 or more people in the display area; and that was from 9.00 am (yes, well before the official opening time) through to 6.00 pm (and we had to boot people out). A lot of people stayed for 10 or more minutes, reading the banners and watching the videos. Several people even commented that they had come back because they didn’t have enough time the day before. What a fantastic way to promote our seafood industry to thousands of people in a short period of time.

In addition to those already mentioned, I would also like to thank:

- Clive Perryman (once again) for all your help with the festival. Not only did Clive provide information and artefacts, he also helped with setting up and taking down the display;
- the Maritime Museum of Tasmania for providing the graphics for two banners they had on display as part of their Commercial Fishing in Tasmania display, and for providing the old video footage and photos used at the festival;
- Channel Heritage Centre and Tasmanian Archive and Heritage Office for access to the many old fishing industry photos we had on display; and
- anyone else I may have missed – sorry – but thank you.

Seafarers Memorial Launch

“...they that go down to the sea in ships.”

The Seafarers Memorial was launched during the Australian Wooden Boat Festival by Alderman Ron Christie from the Hobart City Council. A large crowd was present and many laid flowers of remembrance on the Memorial in the holes provided. There are 72 names included on the stainless steel plaques situated around the edge of Victoria Dock.

While the TRLFA, TSIC and TAC jointly funded the Memorial many people also donated countless hours to create and implement the design. The organising group is very grateful to all those involved and also understands that the names of some people have been missed, but they will be added in time.
TSIC CHIEF EXECUTIVE’S REPORT

Chief Executive’s report

New TSIC Board
Following the recent TSIC elections I am pleased to advise that Phil Lamb from Spring Bay Seafoods, Jon Poke from Bolduans Bay Oysters, Paul Richardson from the abalone industry and David Whyte from Huon Aquaculture join the re-elected directors James Ashmore, Bryan Denny, Rodney Herweynen, Lindsay Newman and Peter Stegmann on the TSIC Board.

On behalf of the TSIC staff I would like to echo the sentiments of TSIC’s President, Lindsay Newman and thank Sam Ibbott, Odette Lennane and Linda Sams for their contribution to TSIC and the wider industry. As TSIC directors their guidance and input has been greatly appreciated.

Primary Produce Food Safety (Seafood) Regulations 2013
Industry representatives met staff from the Biosecurity and Product Integrity Division of DPIWPE in March to review the draft Food Safety Regulations for seafood. The principal concerns in relation to the draft Regulations identified by industry related to the proposed schedule of fees and the potential duplication with existing food safety standards and regulations with which industry is already compliant.

It was agreed that that there is the need for a more rigorous legal framework to address issues of non compliance with the appropriate food safety standards. However, industry is adamant that the new regulatory framework should not create an unnecessary additional burden on industry.

Given industry concerns regarding the potential increase in reporting and compliance, it was agreed that before the issue of cost recovery can be addressed the structure of the regulatory framework with respect to duplication, the role of the regulator, and the obligations of industry in providing evidence must also be addressed to ensure they are compliant with the food safety scheme.

DPIPWE representatives acknowledged that recognition of other accredited food safety schemes such as AQIS approved arrangements should be explored. From an industry perspective where there are already audited plans in place that meet or exceed the criteria contained in the proposed regulations and principle Act, the Primary Produce Safety Act 2011, they should receive an automatic “tick” of approval.

The stakeholder working group will reconvene in the near future to discuss proposed changes to the draft Regulations.

NSCV Parts D & E
After extensive discussions with AMSA with the support and assistance of MAST and the Tasmanian Government in relation to the revised Parts D&E of the National Standard for Commercial Vessels, I am pleased to advise that AMSA have included the key changes to the revised standards requested by Tasmanian industry. The changes will ensure those with existing certificates of competency and existing vessels will be able to continue to function without any change to their current operations. In addition the flexibility requested for entry level certificates and coxswains certificates has been included in the revised standard.

Achieving the final outcome has been the result of a truly collaborative effort on behalf of the Tasmanian industry and our regulator MAST. I would like to specifically thank Dave Woods (Huon Aquaculture Group), Shane Gillie (Tassal), Rodney Treloggen (TRLFA), Toby Greenlees, Gwyn Alway and Lia Morris from MAST for their support and assistance.

Tassal’s ongoing commitment to improving its business reporting practices as well as improving its environmental and social performance. Sustainability reporting is more than the glossy report though. It is a tool that can be used to improve performance across the economic, environmental and social aspects of Tassal’s operations and the metrics contained in the report allows readers to assess the company’s performance in these areas.

The Huon Aquaculture Group achieved the internationally recognised Global G.A.P accreditation in November 2012 in addition to maintaining its “A” rating awarded by the British Retail Consortium’s (BRC) Global Standard for Food Safety for the third year in a row. The company was also recognised as the “Tasmanian Exporter of the Year” for 2012.

Harmful Algal Bloom Research
The need to develop a co-ordinated approach to the impact of algal blooms was identified as the key priority for both wild capture fisheries and marine farmers at the recent TasFRAB meeting. Industry recognises that these blooms, particularly those that contain biotoxins, will not be “one-off” events. A strategic approach that clearly identifies the key questions that need to be addressed is required.

TasFRAB is in the process of facilitating a workshop to develop a framework for prioritising and initiating the required research to allow industry and government to respond appropriately to the human health risks posed by consumption of seafood that consume or prey on algae containing biotoxins.

Sustainable Aquaculture
The Tasmanian salmonid industry continues to make significant progress in demonstrating that their operational, environmental and social performance is focused on continuous improvement.

Tassal recently released their second Annual Sustainability Report. This year, they have expanded the scope of the report to include hatchery as well as marine farm operations, human resources, food quality and safety and workplace safety. The release of the second report demonstrates...
Launch of the Australian Wild Abalone certification mark

Abalone Council Australia Ltd (ACA) has teamed with a group of ten Australian abalone exporters to introduce an exciting new domestic and international promotional initiative called Australian Wild Abalone - AWA.

The ‘centrepiece’ of this initiative is the introduction of a new certification mark that Australian abalone exporters can utilise to co-brand their premium products in both domestic and export markets.

This co-branding initiative will be underpinned by targeted promotional material/activities/events, the launch of new Australian Wild Abalone website and the introduction of a unique product provenance (brand protection) technology called NanoTag.


The URL is as follows: www.australianwildabalone.com.au

The website is truly international and features four language options – English, Japanese, traditional Chinese and simplified Chinese.

The website has also been established as an educational tool for purchasers (and potential) purchasers of AWA products, as it is a source of relevant information regarding Australian wild abalone, the abalone products that are available and the companies that export under the AWA industry standard.

It has been designed primarily to provide relevant information to any business interested in sourcing and utilising AWA product, focusing initially on the Hong Kong and China markets and expanding later to include other markets such as Taiwan, Japan and Singapore.

In addition to the establishment of the website, print media files for AWA brochures and banners have been developed in four languages for use ‘in market’ by abalone exporters, importers and distributors. These media files have been developed to have the same look and feel as the AWA website and will be used on the ground to promote the new AWA brand. Several in market AWA promotional events are being planned for Hong Kong and China in May/June 2013.

An AWA Code of Conduct, describing the terms of engagement for any exporter wishing to utilise the AWA logo and associated promotional activities, has been developed. Australian abalone exporters must formally sign on to the Code in order to co-brand their products with the AWA certification mark.

The presence of the AWA logo on product packaging will indicate the following:

- that the product is wild harvest Australian abalone;
- that the supplier has conformed with the AWA quality assurance code of practice; and
- that product provenance is genuine, due to the presence of NanoTag labelling technology.

This is the first time in the 50 year history of the Australian abalone industry that Australian abalone exporters have adopted a collective approach to promote and sell Australian wild abalone products. Each participating abalone export company will still market under their own brand but their product will also carry the AWA certification mark, designating...
that it is the finest quality wild harvest abalone.

One of the key messages found within the new AWA website is the very high nutritional value of wild harvested abalone products. A recent study conducted through the South Australian Research and Development Institute (SARDI) and supported by the Seafood Cooperative Research Centre (SCRC) has focused on compositional profiling of high value Australian seafood, such as rock lobster and abalone. This project has provided a scientifically robust and independent assessment of the compositional profile of abalone that will withstand scrutiny from any source – commercial or government.

According to this recent internationally verified study, there are at least ten very good reasons why Australian wild abalone is healthy to eat:

1. **Protein** - Australian wild abalone is a good source of protein, which is a nutrient needed by the human body for growth and maintenance. Proteins are one of the building blocks of body tissue and can also serve as a fuel source.

2. **Docosahexaenoic acid (DHA)** - Australian wild abalone is a good source of DHA, which is an OMEGA 3 fatty acid that is a primary structural component of human brain tissue, sperm, testicles and the retina (eye). Dietary DHA may reduce the risk of heart disease by reducing the level of blood triglycerides in humans. DHA has also been found to inhibit growth of human colon cancer cells.

3. **Iodine** - Australian wild abalone is a good source of iodine; an integral part of the thyroid hormone which helps normal growth and development. Thyroid hormones are required for normal growth and development of tissues such as the central nervous system, and have a broader role in maturation of the body as a whole. The latest research into iodine in newborns has shown that an iodine deficiency can ‘dumb down’ a whole population. Insufficient iodine can cut 10 to 15 points from an affected person’s IQ, according to the World Health Organisation (WHO) – which has recently declared that 50 countries are known to have this deficiency.

4. **Phosphorous** - Australian wild abalone is a source of phosphorous. Phosphate helps to protect blood systemic acid/base balance, acts as a temporary store and transport mechanism for energy, and helps in activating catalytic proteins. Most of the body’s phosphorus (85%) is in bone and the remainder is distributed through soft tissue.

5. **Iron** - Australian wild abalone is a source of iron. Iron is important in transporting oxygen in the blood, which is essential in providing energy for everyday life. Iron deficiency is common, especially in female sub groups (menstruating women, pregnant women, teenagers and athletes) as well as babies and toddlers.

6. **Vitamin E** - Australian wild abalone is a source of Vitamin E. This is a fat-soluble vitamin, mainly found in fats and oils and foods such as fish, as well as some vegetables, and in the fat of meat and poultry. Vitamin E acts as an antioxidant, thereby protecting the membrane of polyunsaturated fatty acids from free radical damage.

7. **Magnesium** - Australian wild abalone is a source of the mineral magnesium. About 50% of the body’s magnesium is found in bone. It is needed for many reactions in the body and helps maintain normal muscle and nerve function, keeps heart rhythm steady, supports a healthy immune system, and keeps bones strong.

8. **Selenium** - Australian wild abalone is a source of selenium, which acts as an antioxidant and assists in the activity of the thyroid hormone. Selenium is also beneficial for the immune system.

9. **Saturated fat** - Australian wild abalone is very low in saturated fat. Consumption of saturated fat may increase the risk of heart disease. Health authorities recommend a diet low in saturated fat.

10. **Trans fat** - Australian wild abalone contains zero trans fat, consumption of which may increase the risk of heart disease. Health authorities recommend a diet low in trans fat.
This valuable nutritional information can now be utilised by Australian wild harvest abalone exporters to help promote and market their products.

Abalone exporters who use the Australian wild abalone – AWA certification mark are also required to use the new innovative NanoTag brand protection system. The NanoTag system will guarantee the authenticity and provenance of all AWA abalone products. Anyone purchasing these products can be confident that they have received genuine, premium grade Australian wild abalone, not some lesser quality ‘substitute’ product; which is important in maintaining the integrity of the new AWA brand. The NanoTag brand protection system consists of two main components:

1. Covert protection – this component consists of tiny metallic tags (NanoTags) that are applied to the surface of the abalone product – the tags are suspended in a UV sensitive adhesive. The NanoTags are smaller than a grain of sand but contain on their surface the AWA certification logo and the individual Export Establishment Number (EEN) of the Abalone processing company. Purchasers of AWA product can verify that it is genuine by shining an ultraviolet light over the product. The UV sensitive adhesive will react with the light, confirming the presence of NanoTags. Examination of the individual tags via a magnifying glass will reveal the AWA logo and the unique EEN which confirms that the product is a genuine AWA product and identifies the particular Australian abalone export company that supplied the product.

2. Overt protection – this component consists of specially branded AWA high security stickers, labels, seals and packaging tape attached to the product and/or its packaging that identifies that it is protected by the NanoTag brand protection system. The AWA stickers, labels, seals and tape are embedded with NanoTags that have the AWA logo printed on them. The NanoTag brand protection system is used by many global corporations to protect the provenance of their products. For example, products from BMW, Yamaha and KTM are protected by the NanoTag brand protection system. For more general information about the NanoTag brand protection please go to www.nanotag.com.au.

This will be the first time that Australian seafood products are brand protected using the NanoTag system. The Managing Director of NanoTag, Ian Allen has been working diligently with abalone exporters for over 12 months to custom build a range of NanoTag products and application methodologies that will protect the broad range of abalone products currently available in the marketplace.

On behalf of the Australian wild harvest abalone industry, I would like to thank both the Australian Fisheries Research and Development Corporation (FRDC) and the Australian Seafood Cooperative Research Centre (SCRC) for supporting this exciting initiative.

Dean Lisson
Executive Chair
Abalone Council Australia Ltd
Tasman Peninsula ‘Working on the Water’ program

The inaugural ‘Fishing near the Forestier - Working on the Water’ program will be conducted over two days in April. The program will target year 9 and 10 students at Tasman District High School and Sorell School.

Tuesday 9 April will consist of a classroom visit to each school. During this visit, we will discuss the different sectors of the seafood industry, their value to regional Tasmania, and most importantly, work options and career pathways into the seafood industry. The classroom visit will also highlight the tertiary and vocational education and training opportunities that exist in Tasmania, as well as highlighting the larger scale southern Tasmania ‘Working on the Water’ program. Wednesday 17 April will be a ‘hands-on’ field excursion, where we will see and learn all about growing oysters and salmon on the peninsula. It promises to be an excellent program.

Finally a huge thanks to Ben Cameron and Cameron of Tasmania, Fiona Ewing and Tassal, Rob Pennicott and Pennicott Wilderness Journeys, and Lynne Hanlon and the Department of Education for your huge support of this event.

What’s happening at TSIC?

4th Tasmanian Seafood Industry Awards

Don’t forget, the Tasmanian Seafood Industry Awards will be held on 29 June at the Hobart Function and Conference Centre.

There are 11 award categories:
- Restaurant
- Fish and Chips
- Primary Producer
- Business (Large)
- Business (Small)
- Research, Development & Extension
- Promotion
- Environmental Stewardship
- People Development
- Young Achiever
- Industry Ambassador

More information, entry forms and application processes can be found at: http://www.tsic.org.au/files/Seafood_Awards/9740_TSIC_Awards2013_R.pdf

Alternatively, you can call the TSIC Office on (03) 6224 2332.

Closing date for applications is 5 pm, Thursday 18 April
On 7 March, a group of seafood industry representatives met at the Royal Yacht Club of Tasmania to discuss a topic which can generate a great deal of debate within the Tasmanian seafood industry – social licence to operate. During the course of the afternoon a diverse array of issues, examples and ideas were discussed, and the unanimous conclusion was simple – the Tasmanian seafood industry needs to progress a plan to manage its social licence to operate.

What is a social licence to operate?

As with most topical issues, there is no accepted single definition of social licence to operate. However, the concept of social licence can be explained as follows:

The majority of the community remains supportive of an industry or business once aware of the economic and employment advantages the industry provides; the essential products that it produces for domestic and overseas markets; and the impact it can have on the environment and some local communities.

Put this in a slightly different way and social licence is about the long-term continued community acceptance the seafood industry needs to operate.

Social licence: fact or fiction?

I can hear some people questioning whether the Tasmanian seafood industry needs community acceptance; while others may think we already have it. If you cast your mind back some 20, or even just five, years ago to catch or farm seafood commercially you needed to invest/pay the Government to access the public resource.

Social licence was essentially granted if you met (or even just went close to meeting) Government regulation. Why? Because the broader community put their full trust in the government and scientists who manage our public resources. In other words the ‘community expectation’ space completely overlapped the regulatory requirements.

A lot has changed over the last 10, or even just five, years. The broader community has become far more aware and interested in environmental issues, and they have become increasingly sceptical about the government and scientists’ ability to manage our resources. Support for conservation groups has grown, and social media has allowed far more effective community and media campaigns. The result has been an elevation of community expectation above that set out in regulation.

Going back to the previous analogy, today the ‘community expectation’ space falls above the regulatory requirement space.

What are the consequences of this shift in community expectation? Well to put it simply, government are more willing to make regulatory changes. Integral to this process is the fact that only 5% community support for an issue can result in regulatory change within a swinging electorate. So the vocal minority can have substantial power. Don’t think this is true? Well just think about all the regulatory changes that have been implemented over the last five or so years!

And if you think you haven’t already been impacted by social licence then think again. Each new regulatory change implemented over the last 10 years has cost industry. And the end does not appear to be in sight. You are also paying in other ways. For example, the codes of practice, environmental management systems and programs such as the rock lobster ‘Clean Green’ program, and the multitude of seafood sustainability certifications available worldwide all aim to address community expectations that fall above and beyond government regulation. Will they become legislation one day? Under the current climate, maybe they will.

What can we do?

What can the Tasmanian seafood industry do to address social licence and community acceptance? We could just keep going the way we are, accepting the ever-changing regulatory burden placed on industry. But there will come a time where the changes will become cost prohibitive for industry. What happens then?

We could simply stand up and say, “No, we cannot continue to meet your ever changing regulatory requirements. We operate in a sustainable way already, meeting all regulatory requirements”.

The risk of this approach is widespread rejection by the community for industry. ‘Won’t happen’ I hear some of you say! Well go and ask the forestry industry; or the operators of a large vessel that recently wanted to fish in Australian waters their thoughts on the topic.

Alternatively, we can implement strategies that allow the seafood industry to manage community expectations. To achieve this we must become more proactive and strive to foster stronger community support for the seafood industry. The first stages will be to better promote our world’s best management and operations, and most of all ensure that the correct information is out there. If we have strong community ambassadors out there then government will not need to change any regulations.

Sounds simple? Well I can guarantee you it will not be an easy journey. The solution is not a simple 12 month plan, but will instead require a concerted long-term plan and support by industry. This is because there is an ever-changing baseline of community acceptance that we will continually need to review and manage. Possibly the ultimate task will be getting the whole of industry on board with the concept of social licence and convincing them of the benefits.

If you are interested in attending future social licence forums then please contact the TSIC Project Manager, Julian Harrington, at projectmanager@tsic.org.au.
The last remaining closure for the rock lobster fishery on the East Coast of Tasmania was lifted on 9 February, following receipt of analysis results for rock lobster samples collected from near Bicheno and Maria Island which showed concentrations of PST below the maximum allowable level of 0.8 mg/kg. This allowed the A/Director of Public Health to lift the public health warning relating to the consumption of rock lobster viscera for that section of coast between Marion Bay and St Helens.

The impacts of the unprecedented biotoxin event have proven to be significant for both the commercial and recreational fisheries as well as the Department. The costs to the commercial fishery in terms of reduced catches are still to be fully assessed but it is clear that fishers reliant on the East Coast fishery have been impacted financially. From the DPIPWE perspective, the costs for sample analysis, sample collection, freight and public notices alone have been calculated at $150,000.

The decision making of Marine Resources throughout the whole of the biotoxin event has been driven by two primary objectives: (1) to minimise risk to human health; and (2) to protect access to the markets upon which industry is reliant. Fortunately, both of these objectives have been realised.

The experience from this event has highlighted an urgent need to develop a strategic approach to guide the management of future biotoxin episodes. Clearly there is a need to improve our understanding of algal bloom events and their link with biotoxins in crustaceans. It is also necessary that we quickly develop an understanding of the link between biotoxin levels in crustaceans and risk to human health. A comprehensive research project to inform these knowledge gaps and identify management options has been developed in close consultation with industry and regulators. Funding is being sought from the Australian Seafood Cooperative Research Centre (SCRRC).

Clearly this will take time and there needs to be immediate progress on determining how best to manage another episode, should we be faced with a similar biotoxin event next spring.

There is an immediate need to better manage the commercial risk attendant with a biotoxin episode. This includes a clear understanding of the issues and decision path for determining the vexed issue of closures.

One of the lessons from the recent event has been the importance of traceability through the supply chain, to provide greater flexibility for managing biotoxin episodes and reduce the risk of state-wide recalls of fish.

The difficult issue of determining the best option for dealing with product with paralytic shellfish toxin levels above the maximum permitted needs to be resolved. This will require a careful assessment of the benefits and costs of the various options, in the context of minimising the impacts on fishing businesses, ensuring that human health risk is adequately addressed and market acceptance.

Marine Resources intends to progress resolution of these issues and develop an agreed strategic approach in consultation with the TRLFA as a matter of priority.
Abalone dive loggers – know your obligations

On 13 December 2011 an (amended) instrument was approved requiring all abalone divers to keep and submit records to be used for the collection of information relating to the depth and location of their diving.

Over the past 12 months, the Department has maintained a ‘watch-and-see’ approach to diver behaviour and compliance with the instrument. Unfortunately, it has now become apparent that an increasing number of divers are repeatedly failing to comply with the full requirements of the instrument and other associated documentation.

Divers are reminded that it is their personal responsibility to ensure all requirements of the instrument (and other mandatory documentation) are met whilst undertaking any fishing activities under a fishing licence (abalone dive).

Failure to fully comply with the requirements of the instrument may breach section 145(1)(a) of the Living Marine Resources Management Act 1995 (the Act). The options of education, warning and infringement are open to the police, as well as the option of prosecution. A finding of guilt by a court in relation to a breach of this section of the Act may see a diver fined a maximum of $26,000 and allocated the accompanying 200 demerit points. Upon accumulation of 200 or more demerit points, in any five-year period, a diver would be suspended from obtaining or holding a Tasmanian fishing licence (abalone dive).

IMAS forwards new abalone data logger units to divers approximately 10 days prior to the end of each 3 month period, with divers being required to return their GPS logger module and depth logger by attending a post office with the supplied reply paid envelope. The initial instruction issued by IMAS remains - reply paid envelopes containing logger modules are to be lodged at a post office. By lodging the parcel with a post office, as opposed to placing it in a post box, Australian Post parcel tracking is initiated.

Logger units will not be accepted at the Licensing and Fisheries Monitoring Section on the ground floor of the Marine Board Building.

Units must be received by IMAS within 10 working days of the end of each quarter - 31 March, 30 June, 30 September and 31 December. Failure to do so may result in no additional loggers being issued, or the matter being reported to Tasmania Marine Police for investigation.

Faults

Should a diver experience a fault in either component of the abalone logger units they are to call the IMAS Logger Faults mobile number 0408 301 367 and follow the instructions provided by IMAS relating to the provision of location and depth data for that (one) fishing trip. Divers are required to call this number prior to commencing the fishing trip if any component of the abalone logger unit is found to be unserviceable.

Return of abalone loggers

A large number of logger units have been reported as not being received by IMAS within the required timeframe, with a significant number of units being reported as lost. Abalone logger units are expensive and as such must be accounted for. They must also be replaced. In future, divers may be required to meet the cost of replacing logger unit components if lost or damaged.

Activating logger units/components

To maintain data integrity, IMAS routinely conduct a full audit of all information retrieved from logger units, comparing this to abalone docket lodged by each diver. IMAS has reported some concerning patterns of divers failing to activate GPS logger units.

Divers are advised that failure to activate any component of an abalone logger unit may result in the matter being reported to Tasmania Marine Police for investigation.

Change of supervisor

Before a supervisor can be removed from a fishing licence (abalone dive), that supervisor is required to return all parts of their logger unit to IMAS, in accordance with IMAS instructions. New supervisors intending to fish under the authority of a fishing licence (abalone dive) are required to contact IMAS and organise their own data loggers. Divers are not to hand their loggers over to another diver.

Fishers are urged to keep themselves up-to-date with abalone docket logger unit requirements and information. Enquiries relating to a diver’s responsibilities and possible implications for failure to adhere to requirements may be made by contacting Debbie Edwards, Senior Officer – Licensing and Operations on (03) 6233 6514 or by emailing fisheries.licensing@dpipwe.tas.gov.au.

Debbie Edwards
Garry Kerr – fisher and historian

Garry Kerr is a quietly spoken man and self-styled hunter/gatherer/fisher, who also has a very perceptive side apropos human nature. He considers himself lucky to be a working seaman and describes himself as a bit of a bushwhacker, due to his lack of education. Yet, he has also been writing and making documentaries about ships and the fishing industry for some years now and was about to launch his latest effort, Crayfishing around Tasmania: a fisherman’s perspective at the Australian Wooden Boat Festival, when I met up with him.

If you are interested in viewing some of the characters involved in the development of the fishing industry in Tasmania then this film is a ‘must see’. Compiled with considerable humour, it shows just how hard and dangerous this industry really is, while also demonstrating the degree of freedom it offers as a workplace. Fishermen such as those from the Pike, Whayman and Hardy families are interviewed about their years of fishing. Having just arrived in Hobart, after fishing his way down the West Coast from Victoria in the Eumeralla, Garry described how he enjoys the wonderful smell of the rainforest that hits you as you come closer to the shore; a mix of forest, salt, mud and rain. He then went on to explain how he became interested in recording the oral history of seafarers.

Garry grew up in Portland, Victoria and as a boy knew very little of Tasmania, let alone the West Coast. Leaving school as soon as he could, at age 14, Garry initially worked in the local meat works. However, when the opportunity to crew on a local cray boat was offered he jumped at it, although he did have to overcome seasickness. He persisted and, after a couple of years of learning the trade, when he was only 17, Garry purchased a 28ft cray boat, Valdarie. He told me, “I’ve been my own boss ever since. Being your own boss means you have control of your life and can make your own decisions and you have to take responsibility for them”.

After a while Garry needed a larger boat so, in 1965 he bought the 90-year-old former trading ketch Gazelle. A typical 55’ sailing barge of the era, (she was built in Hobart in 1875) she had a round semi elliptical stern and a bluff bow and, with her shallow draft, was able to negotiate the rivers of the Huon and Channel with ease to transport timber and other cargo to Hobart. Garry discovered that she had been owned by Stan Spaulding during the 1930s when she traded to Nubeena for many years, and may have been the only barge to be fitted with a head, and to be licensed to carry six passengers. Gazelle once capsized under sail when hit by a sudden squall and it was quite a business to right her. Garry soon discovered that buying her was a big mistake; just not the right boat for the job. Over the ensuing 15 years he had a series of boats each one getting slightly larger.

In 1981 he had the Jane Kerr designed by Ken Lacco and purpose-built by Garry Stewart in Port Fairy. He deliberately set her up with better accommodation than most cray boats, so he could take his family cruising. Built of Huon pine, she was named after his youngest daughter. The boat was run by Doug McDougall for some years and Garry eventually gave over custodianship to him in 1995. She became a little neglected over the years and was finally bought about five years ago by Tim Phillips, who owns the Wooden Boat Shop in Sorrento. A specialist wooden boat builder who Bruce Stannard describes as, “As passionate as he is knowledgeable about the traditions and the practice of fishing under sail in the treacherous waters of Bass Strait”, Tim is restoring Jane Kerr as a working cray boat.

For 25 years Garry worked the West Coast of Victoria, but catches started to get harder as gear improved and, as he had heard there was less competition around Tasmania, he started fishing on the West Coast in 1988. Ever since he has been fascinated by the scenery, history, wilderness and waterways of Tasmania.

After the Jane Kerr, Garry bought the 58’ steel cray boat Soluna from Ron Roozendaal of Bridport. She had been built in Hobart for Martin Beck in the late 1970s. Garry sold her to Rob Rattray when he decided to have another boat built that could work offshore in all weathers. Soluna is still working out of St Helens.

Garry asked John Anderton of Hobart to design his next steel-hulled cray boat, the Eumeralla. She was built by Rod Macdonald and launched in Portland in 1996. Garry tells me it looks like she will be the last boat he owns. He now spends far less time fishing and has handed over much of the hard work skippering to his son, Matthew. This has provided Garry more time to pursue his interest in oral history. This interest came about after Garry bought Gazelle and researched her background. He says, “I’ve always been fascinated by history. The old men would talk of how things used to be and it seemed to me that none of it was being recorded or

> PROFILE GARRY KERR
written down. I saw the old traders being pensioned off and abandoned with nothing done to preserve any of them and I felt that something was being lost. It was only after I announced that I was going to write a book that I began to realise what I had let myself in for. I needed help and luckily, I got it, so a joint effort brought about my first book, *Australian and New Zealand Sail Traders*, in 1974.

It was another ten years before Garry had time to write again. Inspired by David Butcher’s, *The Driftermen*, which was an oral history of the herring drifters of Britain, he spent three years researching and writing about the different fishing boat styles that had evolved for varying uses in Australia. He self-published, *Craftsmen of Australian Fishing* in 1985 after setting up Mainsail Books.

The fact that many of the trading ketches such as the *May Queen* and the *Alma Doepel* were still carrying freight into the 1960s made Garry wonder what the living and working conditions were really like. "Some of the men who had sailed these ketches were still around, and some of them had begun their working lives, under sail alone!" This gave birth in 1987 to another self-published title, *The Tasmanian Trading Ketch*. This was a busy year for Garry as he also published a book of the memoirs and photographs of Ron Thiele, a genuine ‘ketch hand’ from South Australia.

In 1996 Garry published, *Of Men, Boats and Crayfish*, which told the tale of the more than 70 year history of the Norling fishing family. Based out of Port Welshpool, the Norlings were of Scandinavian background and worked their boats around the islands of Bass Strait without losing a life or a vessel.

As Garry worked the West Coast and learned of the small rivers and harbours, he met with many characters. He realised there was an amazing story to tell about the harvesting of Huon pine. The ‘piners’ lived and worked up the rivers for three months at a time in the wilderness, but little of their living and working conditions had ever been recorded, hence *The Huon Pine Story* was published in 1999. It was so popular it went into a second edition in 2004.

Oral history has become Garry’s passion. He says, ‘The best medium for recording oral history is with a movie camera, where the people can both be seen and heard, along with their body language, inflection, accent and expression. Having interviewed those unique characters, the Huon Piners, on audio tape I was keen to save them on camera for posterity’. *The Oldest Living Tasmanian – The Huon Pine* was produced by Paul Scott Films of Sydney and largely funded by Garry Kerr. It was shown on ABC TV and is available on DVD.

Garry warns, “Many academics frown on oral history as being unreliable, and some of it can be. I have found by experience never to use anything that a person tells you about anyone else unless they were there. Hearsay is terribly unreliable but if oral history is restricted to an individual’s own experiences, it can be very reliable”.

With his first film effort in the public arena, Garry thought he would do something similar with the ketch men and the couta fishermen and this resulted in the DVDs, *Trading out of Hobart* and, *The Couta Boat*.

After working on the film, *Trading Ketches of South Australia* Garry decided to follow up the stories of those men still living who had sailed on the great square riggers to and from Australia. He enlisted the help of the Cape Horner’s Association in Australia, to put him in touch with people. The resulting DVD, *The Last Cape Horners* shows just how hard life really was aboard sailing ships in the 1930s.

After making the DVD Garry and one of his daughters, Jane went to Ushuaia in southern Argentina and took passage on a charter yacht, cruising around Cape Horn for one week. They rounded the Horn under sail on the sixth day.

Garry continued producing DVDs, *Trading out of Hobart* and *The Pearl Shell Divers: Australia’s Deadliest Catch*. He also found time to produce, *Wooden Ships and Stockmen* about the passing of an era in Bass Strait.

It took Garry six months to interview and edit the latest DVD, *Crayfishing around Tasmania: a fisherman’s perspective* and he enjoyed it enormously, but is already looking to his next project.

Garry and his wife Judy have four children: Brendan, Matthew, Katrina and Jane. In recognition of his services to history he was awarded an OAM in 2005.

Oysters Tasmania

Bushfires and south-east oyster growers

The Tasmanian oyster industry has been working to assist our colleagues and families affected by the recent bushfires in the south-east of Tasmania. Several oyster businesses, particularly around Dunally and Boomer Bay, lost houses, sheds, boats, cars and other farming equipment – especially baskets.

The Tasmanian Shellfish Executive Council (TSEC), through Oysters Tasmania, coordinated communication along with the Tasmanian Seafood Industry Council and DPIPWE Marine Resources, to provide regular updates on industry losses and immediate needs, and how these needs were being addressed in the short to medium term. The broader Tasmanian aquaculture industry assisted with generous provision of generators, marine farming equipment and financial support.

Our affected growers have received government grants to assist with rebuilding and we welcome the news that most people are back on the water, rebuilding and we welcome the news that most people are back on the water, rebuilding and we thank all those who have assisted.

POMS in NSW

In a heart breaking development in January this year, the POMS virus appeared suddenly in the Hawkesbury River. On the morning of 21 January, there were only a few dead oysters in one lease in Mullet Creek. But within two days all leases in this large bay were affected and millions of oysters had been killed. Similarly at Mooney Mooney – the first signs were seen on 24 January, but by 29 January the whole of Mooney Mooney Creek was affected. A detailed summary of events can be found at http://oysterhealthsydney.wordpress.com/poms-outbreak-hawkesbury-river-january-2013/key-events-summary/.

In short, this disease has devastated our colleagues in NSW. Many have left, or are considering leaving, their farms. It’s hard to imagine how this must feel, and how it must be affecting growers, staff and families.

Planning for POMS – the Tasmanian emergency disease response plan

It’s a ’no brainer’ that the most clear and present danger facing the Tasmanian Pacific oyster industry is the POMS virus. A Tasmanian oyster emergency disease response working group has been convened to coordinate activities that will occur in the event of a suspected POMS outbreak in Tasmania. It is crucial that industry and government responses are as planned and as coordinated as possible, and your industry representatives (Kerry Wells, Ben Cameron, James Calvert and Jon Poke) are working to ensure this happens.

One of the first activities will be to identify key contact people within government, Oysters Tasmania and industry so that, if an outbreak is suspected, communication can be quick and clear.

The first thing that must happen in the event of a suspected outbreak is an immediate halt to all stock movements within Tasmania. The duration of such a halt will be determined by the circumstances surrounding the suspected outbreak. In this regard, growers are reminded of their responsibility to record all stock transfers. This information will be vital to understanding the potential impact of any suspected outbreak.

The working group will be endeavouring to identify any gaps in current disease prevention and mitigation strategies and ways to fill these gaps.

Oysters Australia grower groups

The dates and locations for the autumn 2013 series of Australian oyster industry Regional Discussion Groups have been confirmed for Tasmania - all growers are invited and spaces are still available:

• 30 April (Launceston or Smithton - location TBC);
• 1 May (Hobart - for southern and south east growers)

The meetings will be held to discuss:

• national benchmarking project data, benchmarking case studies and discussions of successful business models and averages;
• the introduction of a national levy for oyster growers;
• formation of Regional Discussion Groups to discuss key research and industry issues; and
• the formats for one-on-one meetings with oyster growers who have participated in the benchmarking program.

The benchmarking program and related discussions will be facilitated by Carlyn Sherriff from Rural Directions and Tom Lewis from ROS Partners. This is a great opportunity for growers to: discuss key production and research issues in a facilitated group situation; hear from industry experts; and network with invited speakers and other growers. If you would like to join one of the meetings please RSVP to Don Defenderfer at: don.defenderfer@rdspartners.com.au or on 0447 561 539.

TORC scholarships

The inaugural Tasmanian Oyster research scholars, Lochlan de Beyer and Danielle Davenport, recently completed their work experience with Australian Seafood Industries (ASI) on the oyster selective breeding program and with a Tasmanian grow-out farmer. Both scholars proved themselves to be extremely capable in the hatchery and on the water, and will make
Tasmanian Scallop Fishermen’s Association

Tasmanian State Scallop Fishery

The 2012 Tasmanian scallop season landings were 814 tonnes, including 18 tonnes of survey quota, compared to a TAC of 1,063 tonnes. Overall, this was a disappointing result given that we experienced a delay in moving from Marion Bay to the White Rock open area and the industry decision to abandon the rest of the season two months early, from around 2 November, because of the toxic algal bloom.

The Minister will shortly announce his decision on the makeup of the next ScFAC, and a meeting of the new industry members will then progress options and exploratory surveys to determine the best opportunities for this year.

Unfortunately, the nasty shellfish toxin A. tamarense group IV is still present in East Coast waters and particularly in the Great Oyster Bay region, where several oyster farms have been closed. So it is possible that we may again experience toxin issues during any East Coast scallop season this year.

Bass Strait Central Zone Scallop Fishery

This scallop fishery officially closed on 31 January with a disappointing total harvest of 249 tonnes, including 13 tonnes of research allowance, compared to the TAC of 2,000 tonnes.

The approach of opening up the whole of the fishery east of 146 degrees longitude with a 85mm minimum shell width, except for two small blocks, and an analysis of VMS tracks, shows that the limited number of vessels in the fishery last season surveyed most of the known productive areas without a great deal of success.

For this year, a meeting of ScFAC members will initiate a review of new opportunities and preseason surveys as may be required, but there is unlikely to be a viable bed of quality scallops yet to be discovered.

Food safety accreditation for seafood

Negotiations are continuing between industry and DPIPWE representatives from the Biosecurity and Product Integrity Division, regarding the proposed new Primary Produce Safety (Seafood) Regulations.

Under these draft requirements, all Tasmanian seafood producers and processors who handle prescribed seafood (currently bivalves and mollusc), will be required to be accredited at a considerable cost, have a food safety plan in place, and be audited annually to ensure compliance with seafood safety standards.

The Food Standards Code has been established at a federal level and must be enforced by State legislation and regulations. All other States already have a formal accreditation framework with regulations for seafood safety and the Tasmanian Primary Produce Safety Act 2011 sets out the requirements for our State food safety schemes, regulations and accreditation.

Other Tasmanian industries already have product integrity and safety legislation in place under the Meat Hygiene Act 1985, Dairy Industry Act 1994, Egg Industry Act 2002 and the Food Safety Act 2003. DPIPWE are determined to introduce these new regulations for seafood to ‘increase consumer confidence and to facilitate market access’, but industry has successfully raised a whole range of issues and concerns through correspondence and meetings.

In summary, following discussions on 13 March, DPIPWE representatives agreed to:

- review the draft regulation in view of the issues raised;
- review the proposed fee structures which we say severely penalise well managed seafood businesses;

welcome additions to our industry when they complete the final year of their studies. In recognition of their efforts, TORC will invite Danielle and Lochlan to attend shellfish futures 2013. TORC wishes to thank Matt Cunningham (ASI) and Scott Brooks (Oysters Farmers) for placement of the TORC scholars.

News from TSEC and TORC

The Tasmanian oyster industry is represented by the Tasmanian Shellfish Executive Council (TSEC) and the Tasmanian Oyster Research Council (TORC). Matters of recent focus for these groups include:

- support and coordination of needs for our bushfires affected members;
- review industry representation structure and funding;
- coordination of a Tasmanian emergency disease response plan working group – including participation on a national POMS planning exercise;
- liaising with Southern Waste Solutions in relation to the proposed C-Cell waste facility;
- ongoing liaison with the sense.t program – a broad scale sensor network for Tasmania;
- feedback on the draft Primary Produce Safety (Seafood) Regulations;
- input into the review of Australian Seafood Industries (ASI);
- representation on Oysters Australia Board;
- management and delivery of service to the Tasmanian Shellfish Quality Assurance Program (TSQAP) – especially the recent biotoxin event;
- planning for the 2012/13 Tasmanian Pacific Oyster Health Surveillance Program (TPOHSP); and
- providing industry input into the planning of the proposed IMAS Experimental Aquaculture Facility.
not pursue full cost recovery of the program because there is both a public and private benefit;
• prepare a form of regulatory impact statement, analysing the costs/benefits even if State Treasury do not require this;
• prepare guidelines for Chief Inspector exemptions, ie as the scallop industry already has a food safety plan in place we should not have to pay the $504 application fee for accreditation; and
• include all bivalves and molluscs in the draft regulations as prescribed seafood, but other species may also be included at some point.

Scallop specific issues yet to be formally resolved include waiving of the accreditation application fees as audited food safety plans already exist. If there is no scallop season we are not conducting an activity so no accreditation should apply for that season. Similarly with leased units, for example Bass Strait scallops being landed in Tasmania by persons already accredited in another jurisdiction such as PrimeSafe in Victoria.

For scallop processors that already have local council registration as a food business and perhaps DAFF/AQIS registration as an export business, along with regular food safety audits, the new proposed State regulations seem to be completely unnecessary. I cannot see any significant advantage for scallop fishermen to have accreditation. We already have a code of practice, a food safety plan, annual food safety audits and regular laboratory testing for heavy metals, chemicals, E.coli and toxins, so surely we would not need to pay the $504 accreditation application fees as audited food safety plans already exist. If there is no scallop season we are not conducting an activity so no accreditation should apply for that season. Similarly with leased units, for example Bass Strait scallops being landed in Tasmania by persons already accredited in another jurisdiction such as PrimeSafe in Victoria.

The Tasmanian Scalefish Fishermen’s Association (TSFA) met on 7 March for their AGM and general meeting. The Scalefish Plan is due for review in 2014 and hence the TSFA tabled their issues and prioritised them, ready for background papers to be developed.

There were two items in particular discussed at the AGM which concern all members. These were:

1. that the financial year for the TSFA has changed to a calendar one ie from 1 January to 30 December. This will align with TSIC’s financial year and TSIC will promptly the TSFA to have their AGM before 30 March each year. Members who have already paid their subscription will continue to be financial members until 30 December 2013.

2. The quorum required for general meetings has changed to seven, given the state-wide representation of the group, and the difficulty there is to get members along. Often those present speak for others who live/work in their area.

The Executive Committee is made up of the: President, Shane Bevis; Vice President, Craig Garland; and Secretary, Colleen Osborne.

Colleen has asked that members provide her with their current email addresses, so she can forward information to them in a more timely fashion. Her email is: eosborne@bigpond.com.

Tasmanian Rock Lobster Fishermen’s Association

All fishing sectors, including ours have suffered some extremely trying times since early November 2012, when we were first made aware of the toxic algal bloom (Alexandrium Tamarense Group IV) in waters off the East Coast of Tasmania. First picked up in mussels exported to Japan, this insidious pest created major problems for the rock lobster fishery.

A meeting between the TRLFA and DPIPWE resolved that the East Coast fishery, from Marion Bay in the south to Eddystone Point in the north, be closed until testing for the toxin in rock lobsters around the Maria Island and Schouten Island areas as well as Ansons Bay was completed. At this time it was thought that the risk of contamination in rock lobster was low. Unfortunately, this was not correct. At the same time harvesting of mussels, abalone, scallops, urchins, oysters and clams was suspended.

It was agreed that the risk of sending contaminated product overseas was too high and that if lobster were found to be in excess of the prescribed 0.8 limit a complete closure of the fishery was the likely outcome. Then began a merry-go-round that was to last for months. Shellfish farms were opening and closing on almost a weekly basis as the toxin took...
hold then disappeared, only to turn up a few days later. Testing for rock lobster revealed high readings (in the viscera but not the flesh) in all tested areas.

The State Government Department of Health and Human Services then issued a public health warning regarding the consumption of seafood from the affected areas. Then the Commonwealth Department of Agriculture, Fisheries and Forestry placed a ban on the export of rock lobster from the same areas.

Over the ensuing months tests were undertaken as far south as Tasman Island and as far north as Flinders Island, with closures extending to Waterhouse Island in the north. However, testing south of Lagoon Bay had only low levels, so no further closures were deemed necessary at that time.

As all fishers would be well aware the uncertainty created by the week long wait for test results, as well as the time period between testing, was extremely taxing. Not all boats were able to move out of the closed areas and as more areas were closed this increased the uncertainty faced by all. This also had the effect of extra pressure being applied to the areas outside and immediately adjacent to the closed area.

The up and down nature of the test results, not only in rock lobster, is one of the frustrating side effects of this event, but the fact is that toxic algal blooms such as this one cannot be ignored or treated lightly. People overseas have been hospitalised and even died as a result of eating seafood contaminated with paralytic shellfish toxins from this algal species. As it had never occurred in Tasmanian waters before in a toxic state, very little was known about the toxin and this meant processes needed to be developed to deal with it.

This toxic algal species has been detected from the very shallow inshore sheltered waters, right through the water column to over 300m, where it was detected in giant crab samples.

At the moment the testing of the water on the East Coast shows that we seem to be clear of the toxin. However, information from overseas indicates that it is unpredictable and may occur again this year or many years later, as in New Zealand (who also had an outbreak to coincide with us), where it had been 19 years between outbreaks.

Much more is now known about the toxin and a major rock lobster research project has been developed (but not yet funded) to try and work out future courses of action in the event of a recurrence.

Regular water testing should ensure that in future we get an early warning. Hopefully by then, as a result of the research projects underway, we will have protocols in place to enable industry to react in a timely manner, rather than what occurred this time around.

Rodney Trelroggen
Chief Executive Officer

Tasmanian Abalone Council Ltd

Launch of the Australian Wild Abalone – AWA® certification mark

Abalone Council Australia Ltd (ACA) has teamed with a group of Australian abalone exporters to introduce an exciting new domestic and international promotional initiative called Australian Wild Abalone - AWA®.

The centrepiece of this initiative is the introduction of a new certification mark that Australian abalone exporters can utilise to co-brand their premium products for direct trade in both domestic and export markets.

This co-branding initiative will be underpinned by targeted promotional material/activities/events, the launch of new Australian Wild Abalone website and the introduction of a unique product provenance (brand protection) technology called NanoTag®. The new Australian Wild Abalone - AWA® website went live in January 2013. The URL is as follows: www.australianwildabalone.com.au.

For further information regarding this exciting initiative, please go to the article on page five in this edition of Fishing Today.

Toxic algal blooms

Algae are vitally important to the marine ecosystem and most algae are not harmful. However, when some species of algae are consumed by shellfish, they produce a naturally occurring bio-toxin called PST (paralytic shellfish toxin). These algal blooms can happen in both temperate and tropical waters. When environmental conditions are favourable, such algae multiply rapidly and create an algal bloom.

Inshore Eastern Tasmania has recently suffered two separate algal bloom events - *Alexandrium tamarense* around the central East Coast and *Gymnodinium catenatum* in the south-east. Both algal blooms produce toxins that may accumulate within the meat and viscera of various shellfish including abalone.

The *Alexandrium* bloom during November 2012 created fishery management challenges for abalone, oysters, mussels, scallops, clams and rock lobster. Thankfully, after initial testing for paralytic shellfish toxins, abalone samples came back well below the human health limit and as such we were able to lift temporary harvesting restrictions shortly after the bloom was detected.

*Gymnodinium* bloom events have been occurring for many years in south-east Tasmania and a particularly significant bloom in late 2010/early 2011 created some management “headaches” for our industry, following sampling in the D’Entrecasteaux Channel. Harvesting restrictions in certain abalone sub blocks have been in place on-and-off ever since.

Initial chromatographic analysis of affected abalone tissue samples in both the foot and viscera in early 2011 confirmed the presence of PSTs in concentrations [in some abalone sub-blocks] apparently above the human health limit. I say “apparently” because the chromatographic analysis revealed two ‘unknown peaks’ which could not be identified against known algal toxin peaks.

A FRDC funded project has recently produced some preliminary toxicity results that show that the unknown peaks are very likely to represent a particular family of PSTs, called doSTX, which in fact have
a very low toxicity. Final confirmation of these results will be available by around July this year. It now appears likely that future Gymnodinium blooms will be far less onerous from a fishery management perspective, simply because the cumulative toxicity for this species of bloom is significantly lower than originally determined. This is very good news for our industry! It means that this particular species of algae is not as toxic as was originally thought.

From a broader perspective, a risk assessment currently being conducted by Dr Cath McLeod of the South Australian Research and Development Institute (and funded from within the ACA/SCRC Abalone R&D portfolio) is likely to declare that algal bloom bio-toxins are a very low risk for Australian wild abalone. Initial baseline survey results from across the five abalone producing states have been very encouraging, with bio-toxin concentrations just at or below the limits of detection. The abalone bio-toxin risk assessment will be completed by about July 2013 and this document will then be used to ensure ongoing access to our international markets.

Even though it is highly likely that the risk assessment will declare that algal bloom bio-toxins are effectively a ‘non issue’ as far as abalone is concerned, the industry will still be required to implement a management plan for future algal bloom events. Such a plan is currently being drafted and will culminate in a coordinated monitoring and response strategy involving the Tasmanian Abalone Council, the Tasmanian Departments of Health and Human Services and Primary Industry, Parks, Water and Environment and the Commonwealth Department of Agriculture, Fisheries and Forestry.

**China – Trade and Market Access issues**

Mark Webster (TACL board member and General Manager, Ralphs Tasmanian Seafoods) and myself have recently been appointed to a new industry forum called the Abalone and Rock Lobster China Trade Reference Group. This group was spawned from a combined abalone/rock lobster Seafood CRC project entitled, ‘Industry Strategies to support Intergovernmental negotiations concerning the export of Australian Rock Lobster and Abalone to China’.

This project has been running for over six months now and is all about developing and implementing a strategic ‘Trade Agenda’ to tackle trade and market access issues for abalone and rock lobster into China.

The trading environment for abalone and rock lobster into China is undergoing some very significant changes and it is vitally important that we keep abreast of these changes and strategically position ourselves to tackle the challenges, while at the same time making the most of emerging opportunities. Recent issues at the HK/China border are encouraging Australian exporters of abalone and lobster to move to the direct trade route into the larger Chinese cities of Shanghai, Beijing and Guangzhou. The Chinese Central Government has initiated steps to increase compliance with customs/importing laws and we are now witnessing a transition from the traditional Hong Kong/Shenzhen trade route to the newer direct trade route.

The newly formed China Trade Reference Group consists of representatives from across the Australian abalone and rocklobster fisheries. Abalone Council Australia Ltd, Abalone Association of Australasia Inc, Southern Rocklobster Ltd and Western Rock Lobster Ltd are all represented by this group, as are a number of abalone and lobster export companies.

The project has already produced a very comprehensive report assessing the current trade and market access issues for abalone and lobster trade into China. The report has been prepared by Kreab & Gavin Anderson (www.kreagavinanderson.com), with input from abalone and rock lobster exporters across all producing States.

The report provides the following:

- background information regarding the abalone and rock lobster trade with China, the Australian Asian Trade Agenda (white paper 2012) and the status and challenges of direct trade with China;
- a Situation Analysis of the current trade routes (both direct and informal) into China, focussing on the challenges and impact on the Australian Seafood Industry;
- an analysis of the opportunities for the seafood industry to improve trade with China via ‘partnering’ with the Australian and Chinese Governments, in order to ensure that China’s evolving systems of customs and quarantine regulation work efficiently and continue to facilitate a mutually beneficial trade between the two countries;
- recommendations regarding the correct approach to trade negotiations;
- recommendations regarding a Trade Agenda Communications Strategy; and
- recommendations regarding a Trade Agenda Activity Plan.

The first step in the Activity Plan was to establish a singular body that represents Australian abalone and rock lobster in relation to international trade. As mentioned above, this group has now been formed. The group travelled to Canberra during March 2013 to meet with the Australian Government to commence discussions regarding improving market access, reducing tariffs and streamlining Customs clearance into China. The March round of meetings included representations to the following: Department of Foreign Affairs and Trade; Department of Agriculture, Fisheries and Forestry; The Office of the Prime Minister; The Honourable Julie Bishop – Shadow Minister for Foreign Affairs and Shadow Minister for Trade; Senator Richard Colbeck – Shadow Parliamentary Secretary for Agriculture, Fisheries and Forestry; Dr Craig Emerson – Minister for Trade; The Office of Joe Ludwig – Minister for Agriculture, Fisheries and Forestry; and Rowan Ramsey, Federal Member for Grey, South Australia.

Combined abalone and rock lobster trade into China was worth $378.2 million in 2010/11 (ABARE statistic) and this represents an impressive 8% of the total gross value of all agricultural exports from Australia to China.

It is vitally important for Tasmania (and indeed all States that produce abalone and lobster) that we do everything possible to protect and enhance our trade with China. This important new project has brought our highly valuable abalone and rock lobster industries together in a collaborative initiative to strengthen and expand the legitimate direct trade platform into China.

Dean Lisson
Chief Executive
Tasmanian Abalone Council Ltd
Eminent fisheries professor slams politics in management decisions

When Professor Ray Hilborn from the University of Washington speaks in public, people listen. He has become known for encouraging people to “go ahead and eat fish,” which runs counter to the message from environmental activists.

Professor Hilborn is one of the world’s best-known and most respected fisheries scientists, known for his work with global fishery management. He has worked around the world assessing and developing sustainable fishery management strategies. He brought much-needed sense to the global disbelief brought on by the infamous ‘2048’ collapsing-global-fisheries study by German scientist Boris Worm, published in the journal Science in 2006. When the two men and their dissimilar scientific approaches eventually collaborated, they came to more sober, realistic conclusions. Their resulting 2009 study, ‘Rebuilding Global Fisheries’, which reinforced that fisheries management was in fact in good shape, was widely praised.

Sustainability doesn’t have anything to do with how many fish are there; it has to do with the management system.

Visiting Tasmania in February to attend an international workshop on sustainable fisheries, Professor Hilborn discussed his third book (Overfishing, co-written with his wife, Ulrike) that contends the oceans’ fisheries are not in deep crisis from industrial exploitation. In fact, he takes that often-misunderstood word “overfishing” and lays out its many definitions while dispelling some of the myths about man’s marine pursuits.

“We have a system that essentially assures sustainability. Even when you have stocks that are overfished, the law requires they be rebuilt. People tend to look at the status of a stock and ask, ‘Is it sustainable or isn’t it?’ But sustainability doesn’t have anything to do with how many fish are there; it has to do with the management system. So you can have lots of fish, but if you’ve got a legal framework that requires rebuilding, that stock is going to be sustainably managed.”

In his joint project with Boris Worm and the group of 21 where they looked at the status of stocks, there was no evidence of a silver bullet that some groups advocate — marine protected areas or catch shares — as being either necessary or sufficient. An example is the US, which has rebuilt stocks in systems without catch shares.

The Common Fisheries Policy in Europe is a classic case of the problems that can occur when there is no distinction between science and politics. In relation to this Professor Hilborn states, “They set very vague political objectives then they have the scientists do their work and then the politicians come back in and start tinkering with what the quotas should be. That’s exactly how it shouldn’t work”.

**Controlled fishing is one of the best sources of animal protein, with the least environmental impact and a very low carbon footprint compared with dairy or beef production**

He is apprehensive that the emphasis on the disasters of fishing has dominated the conversation and has led lots of people to believe that fisheries are simply not sustainable. “Essentially what they’re trying to do is throw the baby out with the bath water. They’re saying, ‘Fisheries management has failed. We need to get rid of our current management system and bring in something new.’ Unfortunately, that something new might be a large-scale marine protected area, which is the most common NGO kind of solution. Or ‘ban trawling,’ that’s a real common thing they say and what they don’t look at is the empirical record of fisheries that have been sustainable and contribute to world food security”.

Professor Hilborn is concerned about feeding the world sustainably. He claims controlled fishing is one of the best sources of animal protein, with the least environmental impact and a very low carbon footprint compared with dairy or beef production; even lower than most vegetable crops. Compared to beef, this sort of fishing produced about 100 times less carbon per unit of protein. “If you stopped all fishing and replaced it with grazing, you would need to clear all the world’s rainforests 22 times over to produce the same amount of protein”, Prof Hilborn said.

According to Grahame Turk, Chairman of the Sydney Seafood Market, Australia catches about 240,000 tonnes of fish and exports 40,000 tonnes of high-value product. However, 70% of seafood consumed is imported, equating to 400,000 tonnes of tinned tuna and fish fillets.

Professor Hilborn said environmental groups were out of touch with global developments and in denial that Australia’s fisheries were among the best managed in the world. More than half the seafood consumed in Australia was imported from countries whose fisheries were not as well regulated.

“Australia is subject to a relentless anti-fishing campaign that is causing doom-and-gloom myths, using misrepresentations of overseas examples of inadequate fisheries management. I believe NGOs need the public to believe fisheries are in poor shape to boost their fundraising. We live in a highly connected world but these campaigns have a very narrow focus”, he said.

If the quota is not excessive in a well-regulated fishery, it does not matter whether you catch it with 20 boats or one boat.

Professor Hilborn said Australia’s decision to ban the super trawler Abel Tasman was an international embarrassment, and the decision had nothing to do with science. “If the quota is not excessive in a well-regulated fishery, it does not matter whether you catch it with 20 boats or one boat. In fact, management and monitoring are easier with one boat.”

He added, “When such campaigns succeeded, they put more pressure on Third World fisheries. The Abel Tasman’s catch was intended for the West African market, where lack of protein drove people to poach wildlife for ‘bush meat’.”
How long can you last in the water?

If you fall in water 10°C or below the "one-10-one" rule applies. You’ve got one minute to come to terms with the shock and control your breathing, 10 minutes to activate your personal flotation device or find something buoyant, and one hour of survival time in the water.

Tassal boosts domestic sales

Recording a profit of almost $16 million for the six months to December 2012, salmon producer Tassal is crediting a boost in domestic sales for the 22% increase. However, the value of salmon exports plunged 94%, from $11 million to just $650,000, in line with the company’s decision to scale down exports because of growing international competition. Tassal has said it is cutting the cost of feeding salmon farmed in Tasmania’s south-east and in Macquarie Harbour. The company will pay an interim dividend of four-and-a-half cents per share.

Horse meat scandal

As a result of the substitution of beef scandal in Europe, DNA testing could become mandatory for processed meat products. The UK Food Standards Agency has already insisted that DNA tests be carried out on a range of processed meat products and this approach has been reinforced by the European Commission. On 13 February it announced that thousands more DNA tests are to be undertaken by many retailers in Tasmania, including smaller businesses, who are helping to reduce the use of plastic bags.

NSW lifts ban on shore fishing in marine sanctuaries

The NSW Government has lifted a ban on recreational shore fishing in sanctuary zones within its marine parks. It has abolished the Marine Park Authority and established two new advisory bodies - the Marine Estate Management Authority and the Marine Estate Expert Knowledge Panel.

The Minister for Primary Industries, Katrina Hodgkinson explained, “It’s going to be based on science and based on the advice of expert independent panels rather than just the Government being able to willy-nilly draw lines on maps for its own political purposes”.

Minister Hodgkinson says there’s no evidence lifting the ban on shore fishing will impact on fish stocks. “The greatest impacts, it’s been quite clear, are more likely to be things such as pollution and so on coming in from onshore into the marine environment, not just somebody throwing a line into the water.” She says if commercial fishers do want to get access again, they’ll now be able to take their case to the scientific independent panel.

Plastic bag legislation

Legislation is proposed to be introduced later this year by the Tasmanian Government to prohibit retailers from supplying single-use, lightweight plastic shopping bags for the purpose of carrying the goods bought from the retailer. The proposed legislation builds on initiatives undertaken by many retailers in Tasmania, including smaller businesses, who are helping to reduce the use of plastic bags.

To help prepare everyone for the ban, a free package of promotional materials will be provided to all retailers who register on our website. The materials will help remind shoppers to have their own bags ready to use. The materials will also help staff answer customer enquiries, explain the proposed ban and direct people to further information.

The proposed legislation won’t apply to reusable plastic bags, compostable biodegradable plastic bags [AS4736 compliant], heavier ‘boutique-style’ plastic bags [greater than 35 microns], or thin-film barrier bags used for wrapping prepared food and fruit and vegetables. However, it will apply to any business selling a product, regardless of the size of that business. This includes large scale businesses through to road-side vendors and community events.

Register online at www.plasticbags.tas.gov.au to receive updates, submit feedback and enquiries or to receive free promo materials. For further information email enquiries@plasticbags.tas.gov.au, phone (03) 6233 3240 or use the postal address GPO Box 1751 HOBART TAS 7001.

February floods impact Queensland’s fishing industry

Recent floods across Queensland have had a significant impact on the State’s fishing industry and will have long-term implications. Michael Gardner, Chair of the Queensland Seafood Industry Council (QSIA) said, “Commercial fishers will not only suffer immediate impacts but must also contend with impacts to the marine environment including submerged hazards in the Bundaberg region and beyond”.

He said QSIA is ensuring government is made aware of issues, including:

- losses involving vessels, onshore infrastructure and product;
- water quality in the Bundaberg, Brisbane River and Moreton Bay areas; and
- ensuring that commercial fishers working in impacted areas are safe.
The Productivity Commission’s 2011 review of marketing was a recommendation of the transparency and accountability of RDCs. Measures to increase the efficiency, functions, where the relevant industry to take on industry funded marketing and development corporations (RDCs) agreed to allow statutory rural research on 23 July 2012, the Gillard Government Development Policy Statement, released industry funding for marketing.

Levy mechanisms to facilitate long-term seafood industry to establish appropriate sustainability and the environmental credentials of Australian seafood.

The Commonwealth Government has committed to support the Australian seafood industry to establish appropriate levy mechanisms to facilitate long-term industry funding for marketing. As part of the Rural Research and Development Policy Statement, released on 23 July 2012, the Gillard Government agreed to allow statutory rural research and development corporations (RDCs) to take on industry funded marketing functions, where the relevant industry requests this and agrees to raise a marketing levy. This also provides measures to increase the efficiency, transparency and accountability of RDCs. Allowing statutory RDCs to undertake marketing was a recommendation of the Productivity Commission’s 2011 review of rural RDCs.

The changes announced in the policy statement will require amendment of the Primary Industries and Energy Research and Development Act 1989. The Department of Agriculture, Fisheries and Forestry has started consulting stakeholders about these amendments. The amendments will provide the legislative authority for a levy to be collected and disbursed by statutory RDCs, including the Fisheries Research and Development Corporation. The amendments will not establish a levy. To establish a marketing levy, an industry organisation would consult with members about the development of a levy proposal. To develop a levy proposal, an industry organisation should consult the Department and make use of the Levy Principles and Guidelines, available at www.daff.gov.au.

Industry bodies are requested to begin consulting with their members about the need for a marketing levy in anticipation of the amendments being made, so please contact TSIC if you have a view on this subject.

Report on Channel and Huon waterways

A new report, State of the D’Entrecasteaux Channel and the lower Huon Estuary 2012, has been released. This is the result of a project partnership between Kingborough Council, Huon Valley Council, the Derwent Estuary Program/International River Foundation, NRM South, Southern Water and Tassal. The report was prepared by Dr Karen Parsons of Ecomarine Consulting for the D’Entrecasteaux Channel Project and summarises information on the condition of the waterways, based on available data collected over the last thirteen years.

Covering aspects of water and sediment quality, seafood safety, human impacts, risks associated with climate change, the natural values and biodiversity, the report will be used to: learn more about the current environmental status of the waterways; inform the community; explore the issues; and help to inform management decisions in the future.

Prior to completing this report, Dr Parsons undertook a review of post-1999 literature on the waterways. Metadata has been compiled for the datasets/scientific studies and is presented in the Inventory of Scientific Information report. Both reports can be downloaded from the Kingborough Council website: http://www.kingborough.tas.gov.au/page.aspx?u=660.

Rethink on shark appetites

A Tasmanian-led study has found Great White sharks have much larger appetites than previously thought, debunking the popular belief that the world’s largest predatory fish can survive for long periods (more than a month) between meals.

IMAS’s Dr Jayson Semmens and collaborators from interstate and overseas universities, tagged 12 sharks in South Australian waters. By using a radio-positioning system to work out how fast the sharks were swimming, they could calculate the shark’s metabolism and energy requirements.

“The only prior study of shark energy requirements had suggested that a large (one tonne) shark could survive for 30 days on a 30kg meal for around one and a half months. However, the new research indicates that such a meal would in fact only provide energy for 12 to 15 days. Finding out the energy requirements of apex predators such as large threatened sharks was critical for understanding their role in ecosystems and the implications if their numbers continued to decline”, Dr Semmens said.
Triabunna is a small coastal township 84km north-east of Hobart, on the East Coast of Tasmania. It has had a long association with both forestry and commercial fishing, particularly for rock lobster. Because of this, the area also has a long history of boat building – particularly fishing boats.

Although some of the local shipwrights were not formally trained, they were very skilled craftsmen who established an enviable reputation for soundly constructed and very seaworthy boats. These builders tended to learn their trade from others, with skills often being passed from father to son. As many of the builders were also fishermen, their designs became sought after, because they knew exactly what was needed to do their job!

Between 1950 and 1995, over 100 wooden boats were built in the Spring Bay area by the Thomas, Drake, Wilson and Jones families. Pat Drake reported that three boat builders are still working at Triabunna. This boat building was associated with the local fishing industry. The area has at various times supported fishing for scallops, barracouta, crayfish, jack mackerel, Australian salmon, flathead, trumpeter, perch, abalone, sea urchins and the cultivation of oysters; all of which were never recovered.

The Drake family

The Drake family have built boats out of Triabunna since the early 1900s. Neil Drake built his first ‘couta dingy in the 1930s, before going on to build a number of larger fishing boats. Des Whayman describes him as, “One of the neatest builders... a large and strong man he was noted for his ability to build the exact type of boat that a fisherman required. He was also a very astute fisherman.”

Neil Drake would go out early to pull and then re-set his craypots and then return to Triabunna to build boats for the rest of the day. Some of the vessels attributed to Neil Drake were: Audrey, Dotterel, Caprai, and Neptune (also known as Miss St Helens).

Neptune was an auxiliary ketch of 23 grt/net [49’ by 13’ 1” by 6’], built at Triabunna by her first owner Neil Drake in 1946. It was the sixth vessel he had built. She was renamed Miss St Helens when first registered by owner Louis Felmingham of St Helens at Hobart in 1949. However she reverted to her original name before 1951.

The following excerpt from Broxam and Nash’s Tasmanian Shipwrecks describes her last days:

“On 17 October 1951 heavy weather forced Louis Felmingham and his brother in law AE Board, crew of the fishing vessel Neptune, to land a catch at Boat Harbour, seven miles from Eddystone Point. Next day they set off again for Eddystone Point but failed to arrive, and during the night of 19 October an upturned vessel was believed seen from the lighthouse. On a search getting underway, the vessel’s wheelhouse was found floating off Eddystone Point on the 21st. On the 24th the wreck was discovered in about 90 ft of water, a mile and a quarter north of Eddystone Point. Attempts to refloat the Neptune using the fishing vessels Vivienne E and DJV with the corvettes HMAS Colac and Cowra standing by if required failed and she eventually broke up. Despite extensive searches the bodies of the missing men were never recovered.”

Another of the boats built in 1940 to catch cray was the Vivienne T. The ketch rigged vessel has a length of 40’, beam of 10’ and a draft of 4’. She also has a figurehead under her bowsprit. During the 1951 Sydney to Hobart yacht race the Vivienne T was involved in the dramatic rescue of a sick sailor, as described in The Mercury, dated 31 December 1951:

“The transfer of the seriously-ill veteran skipper Frank Livingston from his yacht Kurrewa III to a fishing boat at St Helens on Saturday ... is one of the most dramatic stories in the history of the Sydney-Hobart ocean race ... In St Helens, bronzed and sturdy Mr Geoff Milne and his friends, already well known for local sea-rescue work, prepared to take the Vivienne T out to meet the ketch. Livingston was transferred to the fishing boat Vivienne T off St Helens Heads.

The Vivienne T is also the subject of a book by one of its owners who describes the skipper’s experiences as a cray fisherman out of St Helens.

In 1945 Nell and Neil Drake had a son, Murray who went on to become a very competent boat builder himself. Known as Micky, he worked for Dean Wilson for a while, before building 14 boats on his own. One of these was the Wiaroa, which was based on the design of Joshua Slocum’s Spray and another the Prudence.
Wiaroa was constructed in 1988 to the highest standards, using $108,000 worth of Huon pine over two inch blue gum Tas oak frames. She displaces 17 tonnes with a length of 39' (11.88m), a beam of 13' 6" (4.10m) and she draws 5' 6" (1.68m).

In 2002 Wiaroa was fitted with a new aluminium wheelhouse, which was fully insulated and lined with marine ply and 12mm timber. The foc’sl was fitted out with Huon, celery and Oyster Bay pine. Wiaroa is still in the hands of the original owner/builder and is currently for sale, coming with a complete set of plans as well as a negotiable A Class Scale Fishing Licence.

The Jones Family

Jim Jones and his brother Fred are documented as building 29 boats and 80 dinghies over the years in Triabunna, starting in 1924 when Jim built Baby Dot. Another of the Huon pine yachts Jim built was the Rushean, which sailed several Sydney to Hobart yacht races. Rushean is presently at the Blunt’s boat building yard in Williamstown, Victoria. The present owner had her transported from Darwin early in February and intends to restore her there.

One of the fishing boats the Joneses built is the Minnamurra, which was constructed in 1947 to a Charles Lucas design. Minnamurra is the Tasmanian indigenous name for ‘plenty of fish’. Owned by Keith and Neil Parker, Minnamurra was 45’ 6” long by 14’ 2” wide by 6’ 4” deep. She had an eventful career, but on 13 March 1953 Keith drowned in a dinghy mishap while working craypots from the vessel at High Rock Point, off Tasmania.

Minnamurra was subsequently sold to Roy Bannerman who renamed her the Bernadette in 1955. On 26 May 1955, she sprang a leak near the Pot Boil off Flinders Island and was rescued by the Police boat Aralua. Jack Norling bought Bernadette in the early 1960s, and she worked out of Apollo Bay in Victoria. The Skipper was Sholto Gordon Douglas and together with his crew of John Trevar and John Warren they left Apollo Bay on a cray fishing trip to the area around Reid’s Rocks, south-east of King Island early in March 1964. When the Bernadette did not return by Good Friday with her anticipated load of Easter fish, a search party was sent out. Part of the vessel was discovered washed up on the beach at CooLomb Bay on Three Hummock Island but there was no sign of her three crew.

Other boats the Jones family built include the Antares, Bayandah, J. Lee M, Ranger, Reliant (aka Erin Lass), Silver Cloud and Sueandra.

Antares now calls Toowoobay, NSW home. Built in Triabunna in 1947 by Fred Jones for “Happy” Martin (“Old Hap”), Antares sailed everywhere for many years before “a decent engine” was installed (a Gardner), by Frank Bosworth who ran her as a cray boat.

Antares was involved in a dramatic rescue in 1995. At about 7.30am on 15 April the crew of the fishing vessel Thor 1 were working craypots off Condor Point on the West Coast. The pot line became snagged and, while trying to work it free the boat was struck by a wave and capsized. The two crew floated clear and were picked up by the Antares. Efforts to salvage the wreck some weeks later were not successful.

Since restoration and conversion by the current owner Antares has clocked 19,000 miles travelling the Pacific, the East Coast of Australia and around Tasmania. She came to Hobart for the Australian Wooden Boat Festival in 2009. The J-Lee M was built by Jim Jones in 1953 as a Huon Pine Carvel Motor Launch. She is 19.7m (64’ 7’’), and was designed by Max Creese. She was the original Gordon River cruise boat and operated from 1954 to 1986 after the Franklin blockade. Now based in Kettering J-Lee M is operated as a cruise vessel by Alan Morrison.

Jim Jones’s son, Dave constructed over 40 boats, mostly from celery top pine. Many of his boats are still on the water and among them is the Marion Du Fresne, a 39’ timber motor sailer built in 1966.

Another fishing boat built in 1961 was the Katrina Maree for Roy Parker, who fished with her for many years. She was eventually sold to work in Ceduna, SA but caught fire at sea and became a total wreck. Roy says she was a beautiful boat to handle, being able to turn in her own length. Dave also built the Yoothapina.

The Castle family

The Castles are another family renowned for building boats from Triabunna. Wendy Maree was a small fishing boat of 17.58 tons, built by John Castle in 1967. She was registered at Hobart in the name of Ian Albert Parker. On 14 August 1984, Wendy Maree’s owner and master Stephen Glover was on a voyage from Tasmania with a cargo of fish and a crew of two, when at about 8.30pm she was lost off Kellys Rocks, Recherche Bay. The master and his deckhand Craig Ashlin were later rescued by the fishing boat Turrah. Attempts made to refloat the vessel two days later were unsuccessful and she became a total wreck.

Ray Kemp designed a Huon Pine 35’ motor cruiser the Island Gypsy, which was built by John Castle in 1969 and has been meticulously maintained since then. With a beam of 11’ 6” and a draft of 4’, her engine is a Ford 120Hp keel cooled diesel with dry exhaust. She is currently for sale.
Malcolm Fergusson

Malcolm Fergusson continues the wooden boat building tradition in Triabunna with unassuming pride, while also adapting to contemporary practices. Among boats Malcolm built was the *Corinna II* in 1982.

The beautifully maintained *Rachel Christine* may be one of the last traditionally built wooden fishing boats to be constructed in Tasmania. Designed and built by Malcolm, she is a credit to owners Rodney and Christine Clark. The details of her engineering and outfit are top class and a tribute to the builder and craftsman involved.

Rodney knew from experience how he wanted the hull of his new lobster fishing boat to perform. He needed good directional stability under way, good resistance to blowing off while standing-by a pot, and he thought that the Victorian couta boats, with their slightly concave but deep-vee sections, might make a good base design.

At 47’ 6”(14.5m) and built from celery top pine, *Rachel Christine* was intended to be operated single handed as a commercial fishing boat. The vessel took five and a half years to build and was launched in September 2002. To remove her from the builder’s shed was quite a process. As two cranes lifted her up the solid timber building blocks were removed and a low slung trailer was worked in underneath her hull.

There is no genset aboard the *Rachel Christine* so in order to drive the necessary pumps, compressors and alternators a toothed-belt driven lay-shaft is installed on the starboard side of the Yanmar main engine. The lay-shaft is driven from the forward end of the engine, rotating at engine speed. A water pump, two alternators, a refrigeration compressor and two hydraulic pumps are belt driven from the lay-shaft. The installation is simple and functional, with belt tensioning devices, space for maintenance and a neat carrier for spare drive belts.

After over a year in service the six cylinder Yanmar 6HA-HTE3 engine of 270 hp coupled to Yanmars own YX90 -1 3.52:1 ratio marine gear has proved a quiet, economical and reliable workhorse, returning fuel consumption and figures of between seven and eight litres per hour.

There is far more to the history of boat building in Triabunna than there is space for here and the story will continue. If you have any old photos or stories of boat building or fishing in Triabunna, or for that matter anywhere else in Tasmania, please contact the Tasmanian Seafood Industry Council and we will incorporate them within our project, ‘Oral History of the Tasmanian Seafood Industry’.
Sydney to Hobart on the Southern Surveyor - how to tame a scientist!  

by Cassandra Price

I have just returned from a five day training voyage from Sydney to Hobart on the Southern Surveyor, which was a component of the Antarctic Masters course run by the Institute for Marine and Antarctic Studies at the University of Tasmania. The primary purpose of the voyage was to train upcoming scientists in biological and chemical oceanographic methods. This included deploying and retrieving oceanography equipment, such as Conductivity Temperature Depth (CTD) devices, launching expendable bathy thermographs (XBT) and undertaking net tows to collect biological samples.

Our planned voyage was to head offshore from Sydney and follow the 3,000m contour towards Hobart. One of the main objectives of the voyage was to determine the biological and physical characteristics of the warm core eddy, in comparison to other water bodies along the East Coast. We conducted 12 stations (areas of interest to investigate) along the Eastern Australian Current. At each station we deployed the CTD sensor, which measured the physical properties of the seawater. It provides accurate data on the water temperature, salinity and depth. Temperature and salinity are characteristics of distinct water masses, which provide a signature or fingerprint of the origin of the water mass. The sampling of water within and outside the eddy will give an indication of where the water masses have originated.

Once the CTD was on board we towed a plankton net for five to ten minutes, to collect zooplankton and phytoplankton. While underway we were to identify species and the community structure of zooplankton and phytoplankton inside and outside of the warm core eddy. Hmm,... looking at zooplankton under the microscope while underway is a tad more tricky than anticipated. “Look there’s a copepod”, then comes the slow rolling of the ship, “There goes a copepod”. It moves out of view and I’m staring down the microscope at seawater.

During the voyage we also deployed the Continuous Plankton Recorder (CPR) which was towed behind the ship. The CPR collects zooplankton and phytoplankton from a depth of approximately 10m. The zooplankton and phytoplankton samples are preserved in formalin for identification later on. The samples collected will give an understanding as to the plankton distribution on the Eastern Australian Current. It then forms part of the AusCPR Survey, which is part of a large scale monitoring program looking at the distribution of the plankton in the Southern Ocean and off the East Coast of Australia.

Apart from the educational side of the voyage, we all got to see an array of wildlife, from dolphins to albatross. The voyage was certainly a remarkable experience. I’m looking forward to participating in the next one.

On behalf of the University of Tasmania, we would like to thank the Marine National Facility, funded by the Australian Government and operated by CSIRO, for the opportunity to join this transit voyage aboard the Southern Surveyor.

Little Swanport update

During March signs were erected at Little Swanport to educate the public about human effluent and waste in the estuarine environment. The signs are an initial step in a wider management plan being developed for the area, to mitigate any health risk that may be associated with human effluent in the marine environment. This has been a collaborative project between OceanWatch, local oyster farmers, Tasmanian Seafood Industry Council, Glamorgan Spring Bay Council, Marine and Safety Tasmania and Tasmanian Shellfish Quality Assurance Program, to educate the public about the effect human effluent and waste in the estuarine environment has on water quality and estuary health.

Just a quick reminder: What happens when you deposit human waste behind that bush near the water’s edge, or deposit it directly into the water? Where does your waste go? How is it putting you and your family at risk? The faecal matter [number 2] that you have just deposited behind that bush or in the water) may seep into the waterways, affecting the quality of the water that you and your family are using, whether that be swimming, fishing or collecting shellfish to cook up at home. Many diseases, such as gastroenteritis and Hepatitis A can be spread through this sort of primary contact.

Furthermore, this type of effluent can also build up in the wild shellfish you are collecting to eat, as well as in the shellfish of the local aquaculture industry, causing risk of wide scale illnesses, and loss of production through farm closures.

Shellfish are filter feeders, which means they feed by straining particles in the water through specialised filtering systems. Outbreaks of food poisoning have occurred from consuming shellfish harvested near human pollution sources. Tasmania has so far been free of these outbreaks, and we want to keep it that way. So, think twice and keep your waterways clean and free from harmful bugs by locating the nearest toilet facilities, burying waste at least 100m away from the water’s edge and 15 to 20cm down, or simply taking it with you.
Successful pilot of project investigating cost-effective methods of monitoring puerulus settlement

For over two decades IMAS has been monitoring larval lobster settlers (puerulus) in shallow inshore waters on the East Coast of Tasmania. This monitoring has provided valuable early indications of trends in future catches in the commercial fishery. For example, low larval settlement observed from 2003 to 2008 was reflected in a downturn in the fishery in recent times.

The Fisheries Research and Development Corporation (FRDC) funded IMAS project, ‘Developing cost-effective industry based techniques for monitoring puerulus settlement in all conditions: trials in southern and western Tasmania’ is investigating ways to enhance puerulus monitoring in Tasmania. Trials conducted under the first phase of this project have successfully shown proof-of-concept for a collector design for use in deeper exposed waters, and a camera system for observing puerulus settlement behaviour.

Puerculus DO settle in deep water

Collectors used for sampling puerulus around the world have all been deployed in shallow water – mainly for ease of servicing by researchers. In Tasmania, these have been successful on the East Coast, but have not stood up to the harsh sea conditions on the South and West Coast where the majority of the Tasmanian lobster catch comes from. Consequently, IMAS has designed and built a fleet of ‘pot collectors’ in consultation with the fishing industry.

In this design the collector substrate is located in a housing which incorporates a sieve to minimise loss of puerulus on hauling. Twelve of these housings were deployed at an inshore collector site at Bicheno, where catch rates were found to be similar to adjacent routine puerulus collectors.

The pot collectors incorporate the collector housing in a standard steel lobster trap, suitable for deployment and servicing by vessels from the commercial fleet. Twenty-four pot collectors were deployed in strings of three in September 2012 into depths from 57 to 102m on the Tasmanian South and South-west Coasts.

The pot collectors were serviced by vessels from the Tasmanian commercial lobster fleet in December 2012, and again in February 2013 after soak times of six to eight weeks. This involved hauling each of the eight strings, removing the ‘lid’ under which the settlement substrate is suspended, collecting any pueruli resident on the substrate, re-fitting the lid and re-deploying the string to the seafloor. Servicing of each string was accomplished in around one hour and feedback from both skippers and crew was positive regarding the ease of servicing. Catch rates of puerulus were higher in the shallower depths (57 to 68m), but were also encountered in collectors at depths of up to 102m. Collectors also yielded other invertebrates (particularly shrimps and isopods) and juvenile red cod, gurnard perch and butterfly perch.

This is the first direct evidence of puerulus settlement in deep water.

This trial has successfully demonstrated that:

- puerulus are retained in the pot collector during hauling to the surface;
- puerulus settle in deeper water;
- collection rates between pot collectors and routine inshore collectors are comparable; and
- our pot collector design can withstand the adverse conditions typical of the South and South-west Coasts of Tasmania.

Puerculus cam – monitoring puerulus settlement from the comfort of your office

IMAS scientists, in collaboration with CSIRO, have developed a prototype camera system for monitoring puerulus settlement and post-settlement behaviour. The camera system captures images at a predetermined interval and transmits them in real time, using the 4G network, to a web server where they can be viewed on any computer with internet access.

The system is comprised of cameras and lights attached to the puerulus collector on the sea-floor, and connected to a surface buoy which houses a battery, solar charging system, single board computer, wireless 4G modem, analogue camera server, analogue to digital converter and relays. The computer can be accessed through the internet to adjust capture intervals, spontaneously capture images, and view images as they are captured.
and update or troubleshoot software. In an effort to reduce costs and simplify repairs and modification, the majority of the components in the camera system are inexpensive and readily available.

In field trials the camera system delivered discernible images of southern rock lobster puerulus on artificial habitats, and the battery and charger system was able to support round the clock hourly capture and transmission of images. The camera system offers a cost-effective means to monitor puerulus settlement and, because of the frequency of images, allows us to monitor more precisely the timing of settlement, the retention of puerulus on the artificial habitat and the behaviour of newly settled puerulus, more comprehensively than the monthly diver-based servicing of the collectors.

On the basis of the success of these trials, IMAS is submitting a FRDC application to fund the second and third phases of the project. This will see the deep water collectors deployed at a number of locations around Tasmania which, over time, should provide state-wide insights into recruitment patterns and trends. It would also entail deployment of the camera system at routine puerulus monitoring sites, which will allow assessment of the representativeness of monthly indices of settlement on existing shallow water collectors.

This project aims to provide industry and government with an increased ability to forecast fluctuations in future lobster catches around the State, allowing management to improve the economic and biological sustainability of the Tasmanian lobster fishery. It also enables the fishing community to become actively involved in monitoring their future. Collaborative projects such as this provide a great opportunity to utilise the skills, knowledge and experience of the fishing industry and demonstrate their commitment to a sustainable future.

For further information contact Graeme Ewing on 0409 009 088 or email Graeme.Ewing@utas.edu.au.
This research project is being undertaken by IMAS, in collaboration with Tasmanian Seafoods Pty Ltd and DPIPWE, and is funded by Tasmanian Seafoods Pty Ltd, the Seafood CRC and IMAS. The project started in July 2012, and is due to be completed at the end of 2013.

The study is founded on the hypothesis that if high density populations of lower grade abalone (like those found in parts of northern Tasmania) are thinned sufficiently, then the remaining abalone will grow faster and larger, the new abalone (recruits) will be of better quality, and productivity will be increased. There are parts of the Tasmanian fishery where this is reputed to have already occurred (Actaeons, Black Reef greenlip), but the changes that occurred in these populations have not been adequately researched and it is not certain what caused them. The Hunter Island project will test the hypothesis and monitor the results under controlled conditions.

The shells of lower grade abalone tend to have distinctive features including the degree of doming, roundness, scarring, thickness, parasitic boring, colour and encrustation. These features appear to develop after the onset of sexual maturity and become more pronounced as the abalone get older. Industry has categorised these shells as new, medium and old, depending upon the extent that these features are manifested (Figure 1). Usually, shells from legal sized abalone harvested from slow growth and high density populations have a greater proportion of old shells. At Hunter Island in north-west Tasmania three pairs of sites have been selected for the study (Figure 2). Each pair shares similar attributes (exposure, algal communities, reef structure) and covers approximately 200-300m of coast. The study requires contrasting fish density, so one of each pair is a control site (subject to normal fishing) while the other is an impact site that is fished heavily so that the density of abalone is greatly reduced. To make certain that sufficient thinning has occurred, the impact sites are fished at a smaller size limit [110mm] down to very low catch rates.

In spring 2012, at each of the six sites, 500 abalone were tagged and released. It is planned to measure the abalone in August 2013, and also in later years to see if there are any differences in growth rates between the control and the impact sites. It is important that these tagged abalone are left in place, and are not taken by divers.

Two hundred abalone have also been collected from each of the six sites. These abalone have been measured, aged for sexual maturity and their shells sent to Tasmanian Seafoods Pty Ltd where they have been graded according to their attributes. It is planned to revisit the six sites next spring and collect further samples at each site. Should there be any differences in either rates of maturation or shell attributes caused by manipulating fish density, then they should become apparent in differences between the control and impact sites before and after fishing.

The size distribution of the abalone from all sites combined prior to the fish-down shows that approximately 50% were less than 110mm in length, 30% were 110 - 120mm and the remainder were 120mm or larger, with few greater than 130mm (Figure 3). It explains why the catch from the island was so low (~30t per annum) when the size limit was set at 127mm, and why it has increased so rapidly following reduction of the size limit to 120mm (95t in 2012). The percentage of abalone smaller than 100mm is probably higher than that shown because they are less catchable than larger abalone. In the most southern site near Duck Bay, the fish were larger, with approximately one third below 110mm, one third 110 - 120mm and the remaining third comprising fish larger than 120mm.

Population reduction at the three impact sites is currently being undertaken by a local diver under a permit issued by DPIPWE. Under the conditions of the permit, he is required to fish down the three impact sites until his daily catch falls below 100kg, and this must be done as quickly as possible. He may employ other divers to help him with the work.
and must take abalone down to a size limit of 110mm. This work can only occur within the boundaries of the sites specified by the permit. He is to comply with commercial fishing requirements such as prior reporting, use of GPS and depth loggers, completion of dockets on transfer of fish, and while fishing under the permit, he cannot take fish under the quota system.

The fish remain the property of the government and are sold to Tasmanian Seafoods Pty Ltd for $23/kg (they are low grade fish). The diver’s fee was negotiated by the TACL at $10/kg (the rate recommended in the Felmingham Report in 2009), and is paid by Tasmanian Seafoods Pty Ltd. The net proceeds of the sale [$13/kg] remain with the government and are deposited in a trust fund for use to the benefit of the abalone fishery. It is estimated that up to $100,000 will accrue to the trust fund.

Six tonnes of abalone have been removed from the three sites so far and catch rates are approaching 100kg/day. It is estimated that there is approximately another tonne of abalone to catch before the three sites have been fished down to the required 100kg/day. Once the fish-down is completed, IMAS will conduct follow-up surveys at the three pairs of sites to make sure that sufficient abalone have been removed. The sites will continue to be visited in years ahead to monitor the long-term impact of the study.

There are other important aspects to this study. If thinning populations produces better quality fish and improves productivity, can parts of the fishery be monitored using shell attributes to determine whether size limits and the size of the annual catch are adequate to maintain fish quality? The current method of shell grading is not suitable for living abalone, so IMAS has recently acquired a 3D imaging camera to measure the external features of graded shells. This enables shells to be measured accurately and facilitates extending the method to the rest of the fishery.

Potentially, shell attribute data would be used in conjunction with a variety of methods to optimise catch levels across much of the fishery. The following outcomes are being explored through the project:

- increased management confidence in TACs that result in higher harvest rates through understanding of density-depandant processes;
- potential to increase regional catches through better management of the quota/size limit interaction; and
- better utilisation of research resources should shell sampling prove effective.
Elements of Shipboard Safety

As the ESS is a prerequisite for most maritime licences it is by far our most popular course. Classes are quickly filling, so please book as early as possible to avoid disappointment.

Master 4 and MED 2

After the successful Master 4 run in conjunction with AMC last year, we are collecting expressions of interest for an August/September delivery of both Master 4 and MED 2. We are well down the track in our discussions with AMC so please give STT a ring to lodge your interest.

Master 5 and MED 2

Currently places are available for all intakes, but this won’t last. Funding is limited and class capacity for practical sessions restricts the numbers considerably. Book now!

NSCV Part D

The final Part D is about to be released. Our thanks go to those industry members who gave their time to review and lobby for the changes to the draft that we desperately needed in Tasmania.

Staff

We have a new Quality Officer at STT. Elli Frediani will be a familiar face from now on as she wades through our QA system and provides advice on a range of training and assessment issues.

STT partnerships with Trade Training Centres

We have partnered with Huonville High School, Circular Head Christian School, St Patricks College and the St Helens District High School to deliver the Certificate 1 in Aquaculture to their students. All the facilities are very impressive and we are hoping that aquaculture will be a regular offering to students around Tasmania in the future.

Enrolling at STT

Don’t forget if you are interested in taking up a traineeship, or have a staff member who would be a great candidate, get in touch.

Contact

Email www.seafoodtrainingtas.com.au or call (03) 6233 6442 for the latest course information.

Jobs and Skills Expo

Julia Gillard addressed the recent Jobs and Skills Expo and spoke about the new ‘Building Australia’s Future Workforce’ package. STT and Tassal manned the info booth and discussed employment and training opportunities with job seekers.
Cold Fronts

When fishermen see a cold front on the weather map in their area of operation they usually start to seek further information, which could be from the written forecast or from one of the many computer model depictions of wind, sea and swell that are on the internet.

Most are familiar with the depiction of a cold front; a heavy black line with triangular barbs spaced along the line, but fewer people understand what is going on in the atmosphere.

Cold fronts are moving boundaries between warmer air to the north and colder air to the south. These boundaries are dynamic, constantly forming, decaying and moving. Our atmosphere is heated irregularly. Lots of heat is received in the tropics, less in mid latitudes and even less in polar areas. If this imbalance in heating occurred with no heat transfer across latitudes the equatorial regions would get even hotter and the polar areas even colder. The atmosphere is constantly in motion moving heat around the globe.

Tropical cyclones, convection and the transfer of latent heat (water vapour) move vast amounts of heat energy away from the equatorial regions. The mid and higher latitudes are constantly mixing warmer and colder air and the mechanisms that mix this air are the transient low and high pressure systems that form, move and decay. One of the boundaries between this mixing of air is a cold front.

A cold front in the Tasmanian region will generally have warm moist air moving southwards, ahead of the cold front and colder dry air moving northwards, behind the cold front. This is a good example of the atmosphere mixing temperatures over a large area.

Initially a surge of cold southerly air moves northward, often meeting some warm air moving southward. When this occurs a large difference in air temperature occurs over a relatively small distance. This temperature differential is what is known as a cold front and may extend as a ‘line’ across hundreds or thousands of kilometres.

The air behind the front is colder, dryer and denser than the air preceding the front. This cold air pushes under the warm moist air, lifting it higher in the atmosphere. This lifting can cause the formation of cloud, rain bands, showers and thunderstorms, generally within 100km of the front. In fact a cold front can act like a moving mountain range.

Think of how the mountains of the West Coast of Tasmania create precipitation. Now think of those mountains moving across the ocean. One notable difference is the Tasmanian mountains extend up to about 1,600m at their highest, but a cold air mass behind a front may lift the warmer pre frontal air over 6,000m.

The surge of denser cooler air ‘squeezes’ the atmosphere ahead of it. This squeezing is the same effect as putting your finger over the end of a running garden hose; the water speeds up. The squeezing strengthens the wind ahead of the front and often these winds have a north to north-westerly component. In a classical cold front the winds (and gusts) strengthen the closer you get to the front, with the strongest winds just ahead of the front.

In the lower levels of the atmosphere near a cold front the higher you go the stronger the wind speed. When there are showers and storm activity ahead of the front they actually help mix the higher stronger winds down to the surface. However, when sustained precipitation from a band of rain begins, it somewhat suppresses this mixing and winds can be lighter than what would occur with showers and storms.

Cold fronts can move very quickly. A fast moving front could be 50 - 60 knots. Most fronts move at speeds of 20 - 40 knots. Cold fronts are generally stronger at lower latitudes during springtime, when the Australian continent is starting to warm up but the sea to the south is still very cold. This combination of warm and cold produces strong temperature changes across springtime cold fronts.

The biggest change in temperature occurs with the passage of the cold front. However, this is not necessarily the coldest air, which may move over an area many hours after the frontal change.

For further information contact Malcolm Riley (03) 6221 2000.
Fish may be shrinking

A new study by the CSIRO shows that fish around the world are shrinking in size, possibly due to commercial fishing and climate change. The study looked at five Australian fish species: tiger flathead; jackass morwong; silver warehou; blue grenadier; and pink ling. The shrinking size is also leading to a drop in fish populations, as smaller fish are more susceptible to predators.

Marine biologist Dr Asta Audzijonyte, of the CSIRO’s Wealth from Oceans national research flagship, and colleagues reported their findings in the Royal Society journal Biology Letters. They found that even small decreases in the body size of some fish species had a big impact on their population size, because it made fish more vulnerable to predators.

“We usually selectively catch the largest and the fastest-growing individuals, leaving the small ones in the ocean. So we only have the small ones left. But then also, only the small ones get a chance to reproduce, and they are more likely to produce other small and slow-growing fish. So in this way, we are getting a long-term evolutionary decline in body size, which is more problematic because the fish will not get bigger quickly, even if we completely stop fishing, because they already became evolutionarily smaller”, said Dr Audzijonyte.

Let's just throw it away!

Scientists have reported on the bizarre sex life of a sea slug that discards its penis after copulation, and then grows a new one. Japanese biologists described Chromodoris reticulata, the red-and-white slug in Biology Letters, as technically a shell-less mollusc, which inhabits warm waters in South East Asia. “No other animal is known to repeatedly copulate using such ‘disposable penes’.”

Scientists found the slug needs 24 hours between couplings to unroll an internally coiled and compressed juvenile penis to replace the used, external organ. It can repeat this feat at least three times. As the thumb-sized slug is a hermaphrodite, it performs dual sexual roles during copulation. It gives sperm to a mating partner while simultaneously receiving sperm, which it stores for later insemination.

In another revelation about the sea slug’s sex life, the scientists found its penis was covered with spines, which suggested these may be used to remove the sperm of previous partners being held in store by their mate. The spines are backward-pointing, making it difficult to withdraw the penis after copulation, which again may explain the organ’s disposable nature.

Medicine could harness mussel power

Mussels secrete a powerful adhesive to enable them to hold tight to rocks which are swept by violent waves. Scientists have created materials that mimic the mussels’ sticky proteins, which could have medical applications such as sealants for foetal membrane repair, self-setting antibacterial hydrogels and polymers to deliver cancer drugs and destroy cancer cells. These findings are from papers presented at the annual American Association for the Advancement of Science Conference in Boston.

Mussels can withstand water travelling 10m/second, which would be equivalent to winds blowing 965 km/hr and more, as they cling to rocks, grasses and other materials under water. A couple of them clinging to a rock can support the weight of a fully grown person.

The ‘glue’ comes from the mussel’s foot, called the byssus, which can cling to almost any surface - wet, dry, organic or inorganic. Researchers trying to reproduce the sticking power in a synthetic substance have developed a version that is equally water resistant and could help close internal wounds, among other medical applications. Another team is working to develop synthetic versions of the mussel’s adhesive that could help repair broken bones or teeth.

Laboratory experiments showed that mussels are significantly less able to hold on when the temperature rises. The resistance of these fibres, strongest in waters 10 - 18°C, diminishes by 60% when the water reaches 8.3°C (15°F) above typical summer temperatures in the mussels’ place of origin.

Researchers had already observed that the mussel’s foot weakened at the end of summer and in early autumn, just when the storm season in the US reaches full force, before regaining strength in the colder seasons. They are trying to learn what causes this seasonal weakening, whether it is related to warmer weather, their spawning cycle or something else.

New bathymetry dataset offers easier access

Geoscience Australia has released a new multibeam bathymetry dataset that provides improved understanding about the topography and nature of the seafloor of offshore Australia, an area which for the most part remains poorly mapped. Bathymetry is the measurement, or mapping, of seafloor topography. One of the most accurate ways of collecting bathymetry data is through the use of multibeam echo sounders, which are acoustic ship-borne instruments designed to map the ocean floor.

The 50m Multibeam Dataset of Australia 2012 is a tiled compilation of the entire multibeam dataset held by Geoscience Australia, including all data lying within the outer edge of the offshore area of Australia, as well as some data in international waters, as at August 2012.

The dataset is available to download as individual tiles from the Geoscience Australia website, http://www.ga.gov.au or the entire Dataset can be purchased for the cost of transfer from the Geoscience Australia Sales Centre.
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Website Links
Australian Government
Australian Fisheries Management Authority (AFMA) www.afma.gov.au
Australian Maritime Safety Authority www.amsa.gov.au
CSIRO – Marine and Atmospheric Research www.cmar.csiro.au
Department of Agriculture Fisheries and Forestry (DAFF) also includes:
Australian Bureau of Agricultural and Resource Economics (ABARE)
Australian Quarantine and Inspection Service (AQIS)
Biosecurity Australia (BA)
Bureau of Rural Sciences (BRS)

Natural Resource Management (NRM) www.nrm.tas.gov.au

Marine and Safety Tasmania www.marine.tas.gov.au

Marine and Antarctic Studies (MAS) www.mas.utas.edu.au

Natural Resource Management (NRM) www.nrm.tas.gov.au

Tasmanian Seafood Industry Council (TSIC) www.tsic.org.au

Fisheries Wholesale
Master Fish Merchants Association


Sydney Fish Market www.sydneyfishmarket.com.au

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