

Oyster News

South Australian Oyster Growers Association

February 2015

Food Forecasting for SA Harvesting Areas

Masters Research findings from Clinton Wilkinson

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Australian oyster farm earns FoS stamp

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Proof of Concept of the Floating Upweller System

President's Report

Thanks for the substantial input, time, and effort, all members of Executive provide to the ever present issues confronting our industry.

SAOGA/SAORC Executive consider the big picture, strive for the good of industry and work to properly represent and serve. They rely on your input and support to do the job well.

I particularly acknowledge the service of two outgoing members of Executive in August 2014:

Gary Zippel (Smoky Bay Rep)

Gary Zippel was a founding Director/ Chairman of SAORC in 1998. It was visionary of Gary to appreciate the need for industry to be fostering and funding research and development, and his interest in science and passion for industry have been motivating forces behind the long term commitment he has maintained.

Gary and wife Tracey, providing valuable administrative assistance in the early stages, have freely offered their time and considerable on farm resources over the last 16 years or so.

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Further Gary was a founding Director of Australian Seafood Industries Pty Ltd, with his vision realising the need for a breeding program for industry, and one which will now serve to protect against the threat of POMS.

Zippel Enterprises have also provided valuable service to industry with on farm resources provided to ASI over the last 13 years and to SAORC.

Gary will no doubt remain committed to industry through his interest in science and we hope continue to contribute to the research and development needs of industry through reference groups and email updates.

Thanks to James Boylan who has stepped into the Smoky Bay rep role.

Dave Sims (Coffin Bay)

Dave's time on Executive has been short but productive. His passion for community service and the environment motivated him to give back to industry and for that we are most grateful. Dave's most notable contributions have been assisting PIRSA and Department of Transport with the review of navigational markers for the recent review of the Aquaculture Regulations (2005) and with the organisation and leadership of marine debris clean-ups and wild oyster knockdowns in Coffin Bay.

Thanks to Bill Stenson who has stepped in to this role and is leading growers in the development of new technology for tying down units, on rack and rail and hybrid systems. Please contact Bill if you wish to participate and contribute to solving this problem in a timely manner. Bill has contributed very considerably to industry in the past and we welcome his involvement once again.

Huge thanks to Trudy McGowan who so capably represents our interests at every level, ministerial, government, industry and research. We are very lucky to have Trudy's expertise

and commitment and thank her most sincerely.

Australian Seafood Industries (ASI) Pty Ltd Update

Seafood CRC 'legacy' funding was secured to assist ASI to implement specific recommendations from a "Review of Australian breeding programs for Pacific Oysters, Sydney Rock Oyster, Barramundi and prawns" prepared for Seafood CRC and Oysters Australia by a visiting expert, Dr. Morten Rye from Norway. Issues highlighted in this review included the long term sustainability of ASI as a commercial operation and the need for professional business and governance structure.

It is SAOGA/SAORC Executive's considered view that ASI is the way to achieve a POMS resistant oyster. SAOGA/Executive is committed to a successful ASI and we hope industry members will be too.

The Morten Rye review was highly supportive of the technical side of ASI.

A workshop in Melbourne, facilitated by Matt Cunningham, ASI and Peter Kube, CSIRO, outlined the technical, quantitative genetics, underpinning ASI selection decisions and provided confidence to industry members who attended.

The workshop highlighted that

- the heritability index of POMS resistance is relatively high and
- a POMS resistant oyster should be achievable in predicted timelines of up to five years.

A strengthened operating budget provided by the levy will strengthen the breeding program.

The Morten Rye report also identified that professional governance was required for a successful ASI. There is likely to be Constitutional change and the Board must now be manned according to competence and skills. It was strongly advised the Chairperson of the board be paid and be recruited from outside the oyster sector, so that a focus on sound governance and priorities would serve ASI's long term needs.

SAOGA/SAORC is both respectful and appreciative of the work which has been undertaken building ASI by Directors and staff with limited funds and input from industry to date. A tremendous amount of goodwill has established and maintained ASI.

Renewal is now required for the benefit of both ASI and Industry who funds it.

SAOGA/SAORC President and Chairperson joined an extended ASI Board mid last year to work with the existing Board towards renewal. To that end an independent report from @theBoardTable consultants was commissioned by SAOGA/SAORC Executive. The report provided a basis for recommendations to ASI Directors on a suitable process for selecting new Independent Board members.

In December, I resigned from the ASI Board due to my concerns with Board processes. A series of SAOGA/SAORC Executive meetings prior to Christmas and subsequent communications with the ASI Board and Oysters Tasmania sought to address my concerns. I thank SAOGA/SAORC and Oysters Tasmania Executives for their time and commitment responding to and addressing my concerns.

The current ASI appointed selection panel for the new ASI Board have an important job to do. Three Directors will be Independent, including the Chair, and two will be selected by shareholder groups, TORC and SAOGA/SAORC. Ability to contribute to effective governance for the latter must be a highly regarded criterion. Take an interest in the outcome.

A strategic plan is just one job for the new ASI Board; changes to the Constitution another.

Two issues still on the table for shareholders – please develop a view and share it with Executive at the growers' meeting in March.

1. The concept of "share of profits" to shareholders in the event of ASI commercial success – some growers want this – do the majority? If so, how can this be achieved?

2. Three year and seven year ASI performance reviews in the Business Plan - Agreement is required on processes to allow 50:50 shareholders an opportunity for effective decision making based on performance of ASI.

I strongly advise you all to take an interest in ASI. Ask questions, seek transparency and accountability. We need to both support ASI and contribute our views as shareholders to have a successful ASI. SAOGA/SAORC seek to effectively represent your views.

Should you wish to discuss any points raised regarding ASI, please contact your SAOGA Bay Representative, Steve Bowley or me.

Aquaculture Regulations Review

Over the last few months the SAOGA Executive has been reviewing the Regulations. A number of areas warrant highlighting. SAOGA is committed on behalf of all growers to maintain and increase our Social Licence.

The ideal of social licence is one to which society (producers and the community) aspire. i.e. *Social License is the privilege of operating with minimal formalized restrictions, namely legislation, regulation, or market requirements, based on maintaining public trust by doing what's right.* (Charlie Arnot, CEO of the Center for Food Integrity: <http://www.borderonline.com.au/archives/1302>)

SAOGA seeks to progress the notion of co-management with PIRSA, and to encourage all members to exercise a heightened sense of responsibility with regard to their obligations under the Act and the Regulations but more importantly, to their communities and for appropriate marine stewardship of the environment in which they operate. To this end SAOGA has worked closely with PIRSA to try to reduce red tape with hopefully more emphasis being given to Industry Codes of Practice which guide the way we conduct our operations and our business.

A strong commitment to Industry Codes of Practice by growers will strengthen government confidence in endorsing industry as ecologically and environmentally sustainable to other governments in the export marketplace. China for example seeks such endorsement from governments or independent certification, and Government is committed to working with industry to support this.

1. Navigational Markers

There has been considerable progress on resolving the many concerns growers have raised with regard to the safety of recreational fishers, and ease of compliance for Fisheries Officers in discharge of their duties for enforcing the regulations. Once Regulations have been through the broader consultation process, and been accepted by Parliament, we will arrange for information sessions to be held with Fisheries Officers, PIRSA and Bay reps to explain the changes to all growers.

2. Avoiding adverse impacts on the Environment/ Escapes, Equipment and Marine debris, Potential for entanglements and Reporting Responsibilities

PIRSA recently contacted all growers reminding them of their obligations under the Act and Regulations with regard to these matters. Industry is required to phase out the use of current rubber band technology by 31 December, 2015, and has committed to work with PIRSA and DEWNR on quarterly marine debris clean ups in the first instance to determine the extent of commitment required in the longer term to address the potential for marine debris to collect on shorelines.

I remind all growers of the requirement in the Regulations of maintaining debris free leases and correcting any escapes, or equipment failures as soon as practicable after storm events.

PIRSA Draft Economic Development Plan

I have now had a couple of meetings with the PIRSA staffer charged with the responsibility of preparing a draft Economic Development Plan for our industry. This is very welcome! We still have a long way to go and will most definitely engage whole of industry in this process, the aim being to have something to consider by our annual seminar planned for September, 2015.

Ceduna Community Cabinet

I am pleased to report that Trudy and I received a very considered and sympathetic hearing from Treasurer Koutsantonis, Minister Brock and Minister Bignell in Ceduna in November, 2014 for the

- the pressure facing industry, its need for innovation, and in particular an ap-based integrated farm management system and
- the need for the "polluters", those who create the need, to accept responsibility and contribute to regulatory cost recovery for the South Australian Shellfish Quality Assurance Program.

We are most grateful to Minister Koutsantonis and Minister Brock's commitments to pursue these matters on behalf of industry and await formal advice before we advise you of the full extent of those commitments made at that meeting.

Visit to France and Ireland (People development program: 2014 FRDC International Travel Award)

The FRDC International travel bursary is supported by funding from the FRDC on behalf of the Australian Government.

Activity undertaken

I attended French Seashell and Marine Culture Exhibition, sponsored by SEAPA, in Vanne, Brittany, France as the Australian delegate and then the Oyster fest in Galway to connect with producers, industry associates, manufacturers of new husbandry techniques and products, and researchers, to see first hand the way in which a world class festival is organised and conducted and observe marketing of oysters. I came away firmly of the view that we have a world class oyster festival on our doorstep in Ceduna, SA.

Outcomes achieved

As the Guest of Honour at the Tradeshow, I gave a presentation on the current state of the oyster industry in Australia and South Australia and listened to similar presentations from both French and Irish representatives. I viewed a range of industry products including grading machines, spat collection products and packaging, and gained a good understanding of the size and value of the industry in both countries, the challenges confronting them, the opportunities before them particularly in Ireland.

I met Irish and French growers, visited three farms in France and two in Ireland and observed a range of different grow out techniques, depuration, packaging, quality assurance methods and regimes and attended the Galway Oyster Festival, where only native oysters were on the menu.

Regular shaking of bags (approx. 6 times a year) replaces the work done by wave action on BST longlines and where they grade once a year we are grading as many as 4 times per year. Needless to say, I have reflected often and long on these differences and the extent of our mortalities.

I now have a good understanding of the European consumers' expectations for oysters (as distinct from ours), their condition and presentation including packaging, the significant differences between Australian grown and European Pacifics, and the price Irish oyster growers are fetching for product in China.

There is a very real opportunity to educate the Australian consumer regarding the value of buying a live product, how to store and shuck and reduce the number of "hands" in the supply chain providing better farmgate returns.

Has focusing so heavily on shape and faster growth in our breeding program, sacrificed resilience? Our breeding program has focused on factors deemed to improve market gains. Europeans sell by weight – we sell by the dozen – is weight an important criterion for us to be seeking further gains? Should we be happy with gains made to date through the breeding program? In addition to POMS which is our highest priority, are oysters which are "fat" and will survive in our challenging oceanic conditions at the mercy of upwelling and varying environmental conditions of more interest to us?

I urge you to consider these questions. Take an interest and seek answers. Robust discussion is required and the collective industry view to these and other questions needs to inform our breeding program from now on. SA industry are shareholders in the ASI breeding program, I urge you to take an interest, learn more about the quantitative genetics used to support decision making for the breeding program, and form a view about what you want collectively from ASI. The Europeans and Irish are slowing down growth in an attempt to reduce mortality.

On my return I met with the CEO, PIRSA and providing him with packaging samples to explore with SA manufacturers, and conversations since reveal other Australian oyster growers are planning to use European packaging for export product.

I see collaborative opportunities with our Northern Hemisphere counterparts in export markets – where they sell into

these markets in months with an "r" and we sell in from May to September; demand is at its lowest for us and oysters are in peak condition. Russia was identified by Irish oyster growers as a potential growing market for Australian oysters given the French and Irish oyster industries cannot currently meet demand.

I am more than happy to talk direct with any grower who is interested in finding out more.

A snapshot of industry for 2012/13

(Econsearch Report available on PIRSA website).

Oyster industry production returns provide Econsearch with the data they need to generate these annual reports. You may be interested in the following:

Oyster Industry Business Turnover

- Direct oyster industry turnover \$35.3 million (down from \$44 million in 2011/12)
- Associated downstream activities (processing, transport, retail and food service) summed to \$68.3 million (up from \$35 million in 2011/12).
- Flow-on to other sectors of the state economy added another \$145.6 million in output in 2012/13 (up from \$114 million in 2011/12).
- Sectors most affected were property and business services, manufacturing, trade and finance.
- These figures suggest that industry is earning less while the flow on benefits for the state are increasing. Industry costs are rising, industry revenue is falling.
- These results could in part be attributed to large numbers of unexplained mortalities in SA (called SA Mortality Syndrome – SAMS) – and need for price increase.
- On the basis of these figures, we are pleased to be working collaboratively with PIRSA to develop an Economic Development Plan for industry to improve both productivity and profitability.

Employment

- Direct employment in oyster industry 254 FTE (down from 274 FTE in 2011/12)
- Downstream activities created employment for around 433 FTE (up from 289 FTE in 2011/12).
- Flow-on business activity generated a further 553 FTE (down from 514 FTE in 2011/12)
- Total employment of 1,240 FTE (up from 1077 FTE in 2011/12) in the state.
- The flow-on jobs were concentrated in the trade (114), property and business services (80), and manufacturing (76) sectors.

It is clear that industry needs to work hard to lift revenue and reduce costs.

China Export Strategy

Trudy organised a meeting in Port Lincoln with Food SA, Catherine Barnett, PIRSA staff and RDA Whyalla and Eyre Peninsula, Food Officer Mark Allsop, recently for growers who responded to her emails re China Trade Show, Sial, May 2015.

If you are still interested but have not yet let Trudy know, I suggest you do so ASAP so you can be included in planning stages.

On behalf of Trudy and the Executive, I wish you a Happy and Prosperous New Year for 2015 and hope to see you all at the forthcoming workshop in March (date to be advised) and the annual seminar.

Thanks for your ongoing support of SAOGA and industry through your membership – we welcome and value your input at any time.

Kind regards

Jill Coates

President
South Australian Oyster Growers Association



New Zealand Shellfish Farmers Set for Savings from New Toxin Test

The most serious algal toxin threat to New Zealand shellfish can now be detected faster and at around a quarter of the previous cost through a new test method likely to be introduced this year.

The test for paralytic shellfish toxin (PST), the most serious of shellfish poisoning syndromes caused by harmful algae, has been developed by New Zealand's Cawthron Institute in collaboration with the UK's Centre for Environment, Fisheries & Aquaculture Science.

Cawthron researchers developed the world's first instrumental test method for marine toxins in seafood using marine biotoxins. It sells for more than NZD 100,000 per teaspoonful to laboratories worldwide, after some people fell sick from eating shellfish affected by algal blooms in the 1990s.

The partnership has developed a new test that reduces the turnaround time for results from that method from days to hours, and cuts the cost to some NZD 300 per test from about NZD 1,200.

It not only continues to protect consumers, but could allow affected farms to return to harvesting more quickly, supporting Aquaculture New Zealand's target of boosting annual revenue, from NZD 400 million to NZD 1 billion by 2025.

New Zealand farmers test waters around commercial farms and of shellfish flesh for signs of algae and toxins on a weekly basis. Under the current PST testing method, a relatively quick screen sample is taken but if that proves positive, a second confirmatory test is required to give an accurate level of the toxin in order to determine if it's safe to harvest.

Aquaculture NZ shellfish quality program executive officer Colin Johnston said because of the cost of the second test, industry players would typically just

stop harvesting and keep an eye on the affected area until the levels dropped under another screening test.

Cawthron's Tim Harwood, co-leader of the Safe Seafood NZ program, said the big gain with the new test is only one analysis is needed to get a complete assessment, saving time and money and giving greater certainty to industry players.

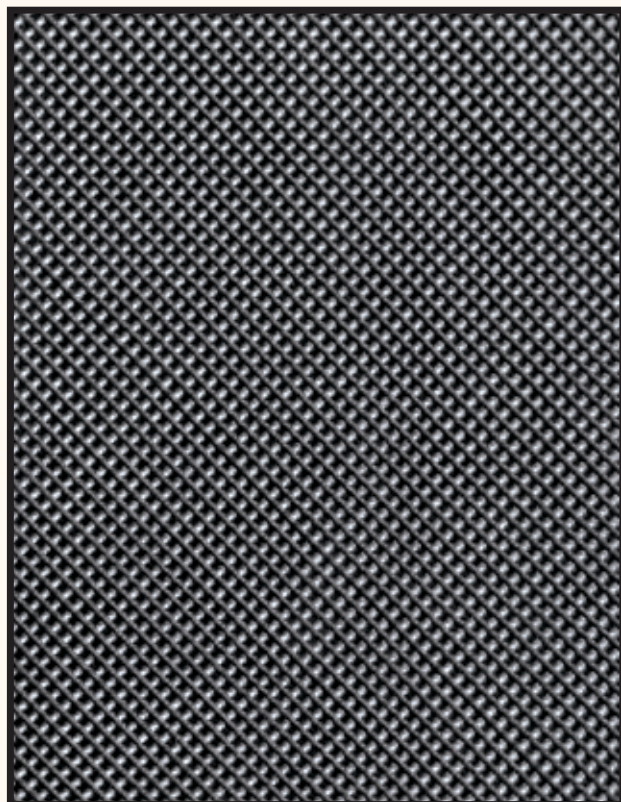
Harwood said before 2010 PST blooms weren't that common but since then there have been a couple of hotspots in the Marlborough Sounds and Bay of Plenty that have caused problems for the export industry.

Cawthron hopes to begin using the new test later this year once the results have been published in a peer-reviewed journal, and final approval given by the Ministry for Primary Industries.

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Food Forecasting for SA Harvesting Areas

As part of my Masters by Research, I have looked at the availability of food within the oyster harvesting areas on the west coast. I recently presented my findings at the SAOGA seminar. Below is a summary of that presentation.

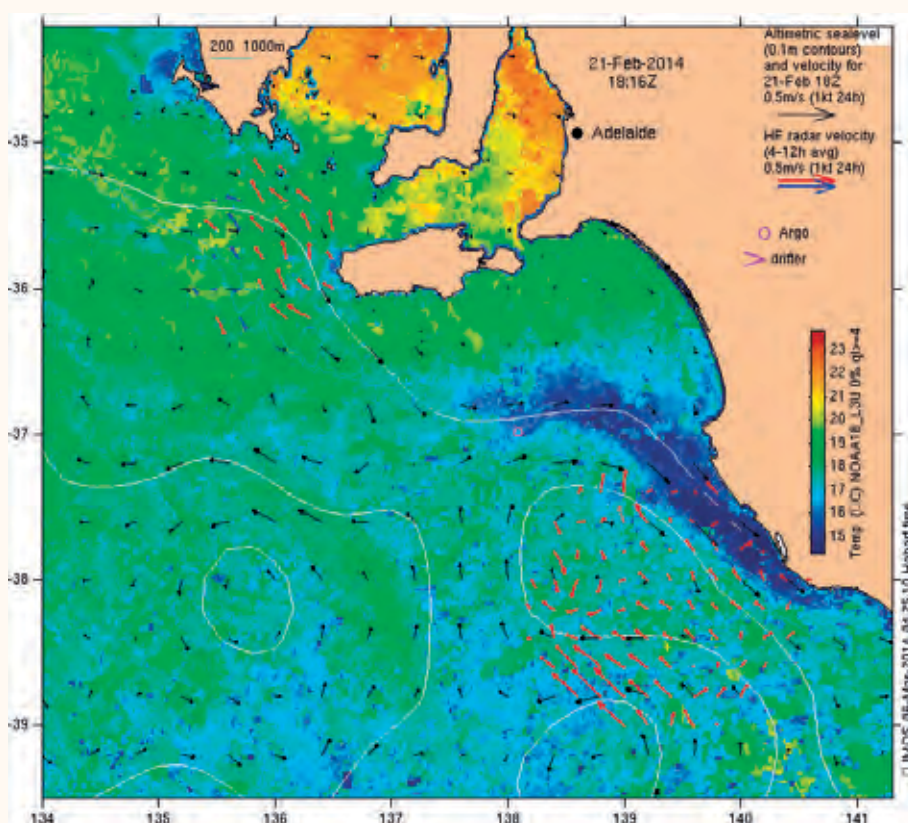


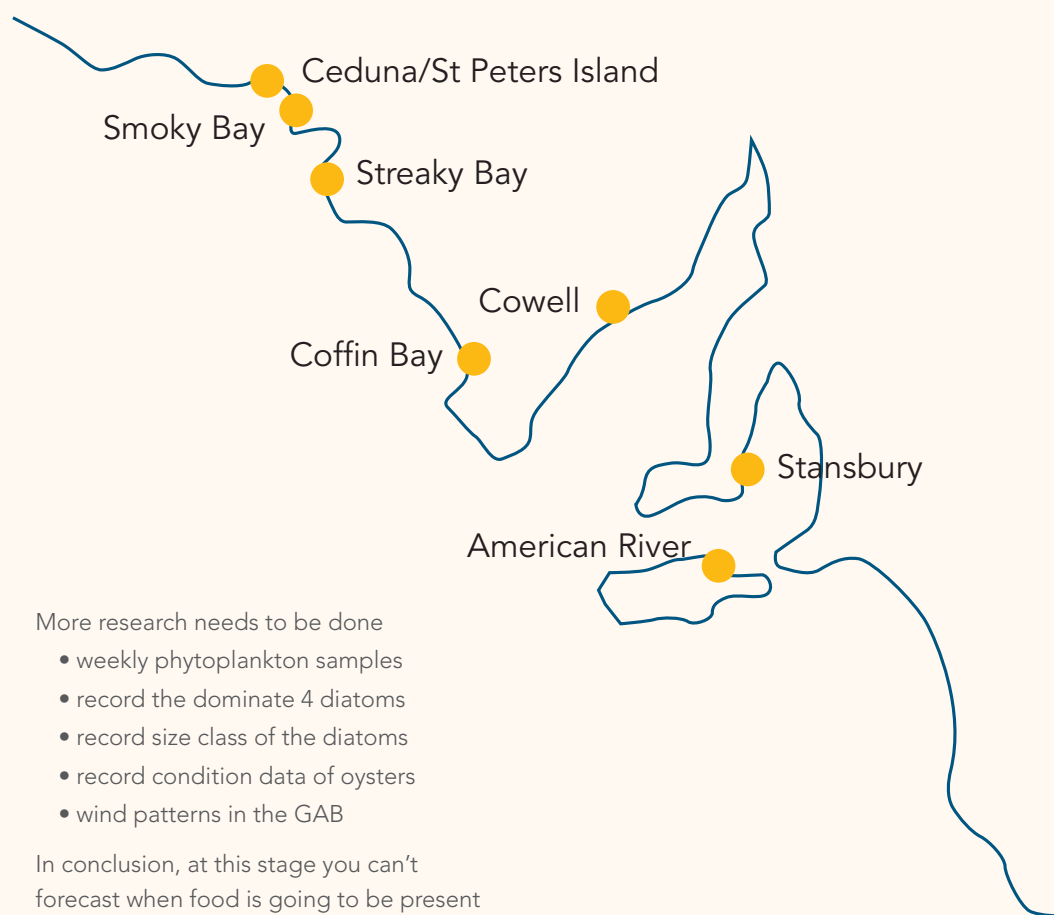
Phytoplankton abundance within harvesting areas is a seasonal event; data shows there are strong summer peaks of phytoplankton. Where does the food come from? The Great SA Coastal Upwelling System (GSACUS).

Upwelling occurs in the austral summer December – March, the upwelling events can occur over 3-10 days, 2-3 times over summer. High pressure systems over the GAB produce seasonal winds from the south east, those winds blow parallel to the shoreline at certain areas of the coast. This forces coastal waters offshore via Ekman transport, pushes water to the left (westward and offshore) and draws up cold, nutrient rich waters.

It's not that simple, East (Bonny) where the shelf is narrow and steep, modelling suggests that upwelling occurs 10 km of the coast. West (KI, Eyre) where the shelf is broad and relatively shallow out to 200km, modelling predicts that upwelling will occur more slowly and be located at the shelf break rather than inshore. The kangaroo Island pool; shelf break upwelling is confined to the SW Kangaroo Island region, where nutrients remain in the pool until upwelling events draw the water to the shallow coastal regions of the eastern bight. This results in upwelling events occurring nearly exactly at the same time across the three separate centers.

We know the upwelling season (Dec-Mar), during summer, water mass moves east to west.





Can we forecast when an upwelling is going to occur, I am not going to answer this as there are too many variables to consider.

What we do know is when an upwelling does occur it is bringing in good food.

Skeletonema gp.

Chaetoceros spp.

Leptocylindrus minimus

Leptocylindrus danicus

Dactyliosolen fragilissimum

It is then up to environmental factors to drive the food present into the harvesting areas.

Not all upwelling events bring in good food, January 2014 saw a massive upwelling event which resulted in a big bloom of *Leptocylindrus danicus* entering Port Douglas, Coffin Bay. The cells were very healthy and large, but the oysters are unable filter them, shut down and oyster condition went backwards.

Later on in February 2014 saw the bloom of the fish killing algae *Karenia mikimotoi* situated in the Farm Beach, Frenchman's region where it killed 100% of benthic fauna and later on benthic flora. The extent of the bloom didn't reach the oyster leases, however, there were reports of juvenile oyster mortalities associated with the bloom, a similar event occurred in 1997.

It's not all doom and gloom.

Every year there is a seasonal upwelling event during summer; environmental factors decided where the food goes.

More research needs to be done

- weekly phytoplankton samples
- record the dominate 4 diatoms
- record size class of the diatoms
- record condition data of oysters
- wind patterns in the GAB

In conclusion, at this stage you can't forecast when food is going to be present in the bays. I suggest using IT to track SST and chlorophyll data daily, below is a link to a remote sensing web site.

<http://oceancurrent.imos.org.au/>

Clinton Wilkinson

Program Leader SASQAP

2014 South Australian Oyster Industry Seminar

As expected the Seminar held on the 7th & 8th of August in Streaky Bay was a huge success and so well organised by Janine Brown and her “bay helpers”.

The Streaky Bay Hotel excelled itself not only catering for the 2 days of the seminar and the Gala Dinner but allowing the local growers to take over the outside deck and put on a fantastic lamb & pig on the spit for the Thursday night casual dinner.

We were fortunate once again to have an outstanding group of speakers covering the important issues affecting our industry. Professor Richard Whittington and Xiaoxu updated us on the latest POMS research and the opportunities with Angasi oysters. We were given an update on the ASI breeding program and the planned levy to deliver a POMS resistant oyster, as well as some excellent information on R&D tax incentives.

A major focus of the seminar was a number of workshops allowing growers to provide their views on the SAORC business plan for the next 5 years as well as exchanging information and views on animal husbandry, effects of climate change spat traits and food forecasting. The Gala dinner was a highlight especially with the surprise entertainment provided

by Philip or was it Philippa McEvoy!!! The oyster competition was once again hotly contested with the following results..... congratulations to all the winners.

Half Shell

1st Tony Schutz–Tondari Fisheries (Cowell)

2nd Simon Turner – Turners Oysters & Seafood (Cowell)

3rd Carl Jaeschke – Cowell Seafood Producers

Whole Shell

1st Gary Martin–Cowell Oysters

2nd Terry Rehn–Cowell Oysters

3rd Steve Bowley–Pacific Estate Oysters (Stansbury)

Now it's time to put this year's Seminar dates in your diary that is being held in Stansbury on 3rd & 4th September 2015.....not to be missed.

Save the Date

This year's Seminar dates are 3rd & 4th September 2015, held in Stansbury.

Australian oyster farm earns FoS stamp



Producer gains sustainability recognition for its Pacific oysters.



Australian producer Angel Oysters is certified by Friend of the Sea (FoS) for its Pacific oysters, farmed in the waters of Smoky Bay, a coastal hamlet on the South Australian Eyre Peninsula.

"From an environmental perspective, Angel Oysters conducts a responsible farming operation which complies with the Friend of the Sea standard," FoS said.

An adjustable long-line system has been implemented in order to monitor the water flow throughout the farms. The impact on the sea bed is negligible allowing the sea grasses to regrow and rejuvenate.

Additionally, an efficient traceability system is in place, so that oysters are fully traced from spat, throughout their life's history on the company's farms, to their destination and the product line.

The company already holds the eco-label National Association for Sustainable Agriculture, Australia (NASAA) Certified Organic and it implements ongoing improvements to infrastructure related to recycled posts and baskets.

"Friend of the Sea certification is an important international confirmation of the natural origin of our oysters," said Isaac Halman from Angel Oysters.

"Oysters have minimal impact on the environment and are one of the most sustainable seafood choices."

First published by IntraFish Media on 21-01-2015



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Catalyze oyster awareness toward ocean preservation, industry growth, and human betterment.

Amplify cultural innovation and creative ventures that build oyster appreciation, engagement, and support.

Abstract submission for technical and inter-disciplinary round-table and workshop sessions DUE APRIL 1, 2015

Proof of Concept of the Floating Upweller System

At Select Oyster Company we're very excited to be able to share with you a video that's been created by Gary and Sam Rodely from Tathra Oysters, who have built their own proof of concept floating upweller system, or FLUPSY.

They wanted to adopt and trial some of the FLUPSY concepts that Prof. Dale Leavitt brought to us on his visit to Australia in July, to see whether this type of upwelling system could work on their river with their Sydney rocks. The results are looking promising, and they may consider developing and expanding its capacity in the future. Many thanks to Gary and Sam for sharing their design and the video which is available on our website www.selectoysterco.com.au.

Dale's visit was part of a People Development Program Visiting Expert Award 2014, funded by the FRDC on behalf of the Australian Government.



Watch online:
<http://youtu.be/Epftk-q9rhM>



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Climate and Oceanographic Summary, Great Australian Bight 2015

These updates include snapshots of water temperatures and chlorophyll concentrations obtained by satellites over the past month. Intermittently they will also include comparisons to previous seasons, and summaries of the prevailing and forecasted climate situation.

Summary

The GAB Sea Surface Temperatures continue to warm gradually and currently resemble a pattern similar to this point in time last year.

Productivity across the GAB is concentrated around areas influenced by upwelling, i.e. the South East, the south and southwest of Kangaroo Island and along the western coastal fringe of Eyre Peninsula.

The upwelling of cold water from the ocean depths to the surface began in the South East of SA in mid December. Cooler water was visible from satellite images along the coastal Kangaroo Island and Eyre Peninsula upwelling zones within 7-10 days of the first major event of the South East.

A rapid warming of waters adjacent to Northwest WA through November was responsible for the deep troughs and weather patterns through December. This

was independent of the Indian Ocean climate system.

A sharp shift in the indicator for the Indian Ocean climate system (IOD) resulting in the warmer water mass moving towards Australia over the past week has lead to a massive increase in atmospheric moisture off northern WA. This has been drawn south and is responsible for the impressive storms and heavy rainfall this past week.

Please note; rapid changes in salinity and stratification (layering) of the water column can occur after heavy rain and runoff. These conditions are often the pre-cursors or triggers for cysts of many of the toxic phytoplankton species to germinate.

GAB Sea Surface Temperature (SST)

Sea temperatures continued to warm slowly through early summer. The actual

SST along the shelf break for early December and the first week of January is shown by the images and graphs Figure 1.

From satellite images, the upwelling system along the southeast of South Australia (the Bonney Upwelling) had its first showing of cold water at the surface midway through December, a little later than coming into the previous summer but earlier than a lot seasons historically. Pockets of cooler water began appearing in satellite images along the upwelling zones of western Kangaroo Island and the western coastal fringe of Eyre Peninsula about 7-10 days after the first major pulse along the Bonney Coast.

GAB Productivity (Chlorophyll a)

Chlorophyll concentrations through the greater GAB area can be seen in Figures 2 – 5. Levels increase considerably through December and January in the areas influenced by the upwelling systems. In the most recent clear satellite image (Figure 4) large algae blooms are apparent in the upwelling areas south of Kangaroo Island, the South East and algal slicks well south of the shelf break.

Figure 5 shows a summary image and graph of chlorophyll concentrations along the 200m-depth contour of the GAB area for the second half of December. This is taken from the Southern Bluefin Tuna habitat forecasting website so has a colour scale specific for tuna; therefore any value exceeding 0.4mg/m3 will appear as red. But despite this limitation (for an oyster

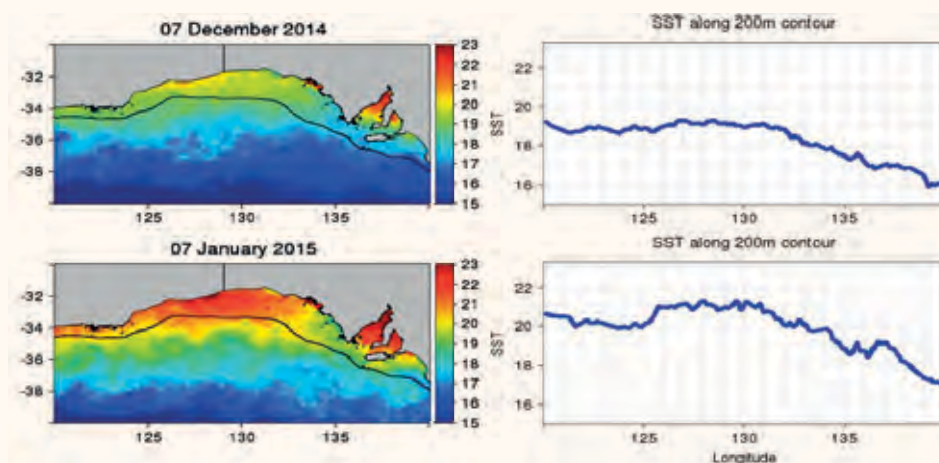


Figure 1: Sea Surface Temperature across the GAB area for the first week of December 2014 and January 2015; satellite image left, and graph of temperature along the 200m-depth contour or shelf-break right (CSIRO 2015).

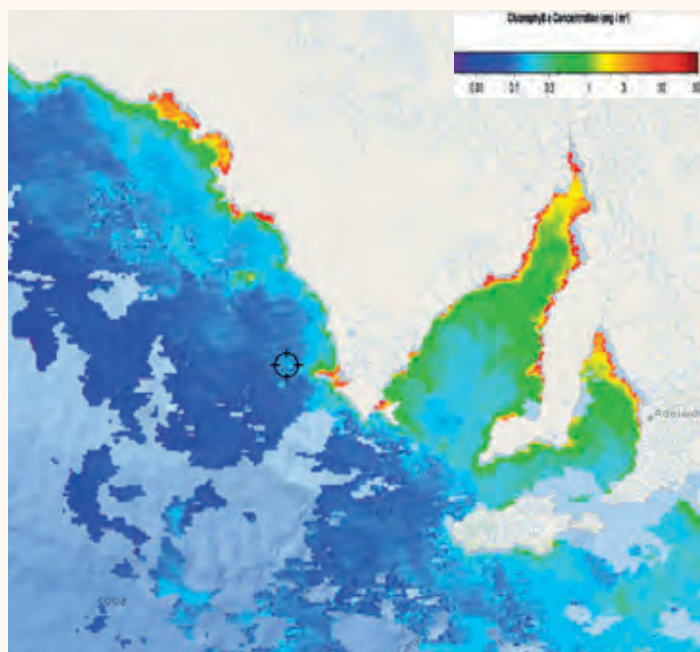


Figure 2: 25th November 2014—Chlorophyll distribution plot, areas bottom left, Head of Bight and east of Kangaroo Island are blank because cloud cover obscures the satellite view (FishTrack 2014).

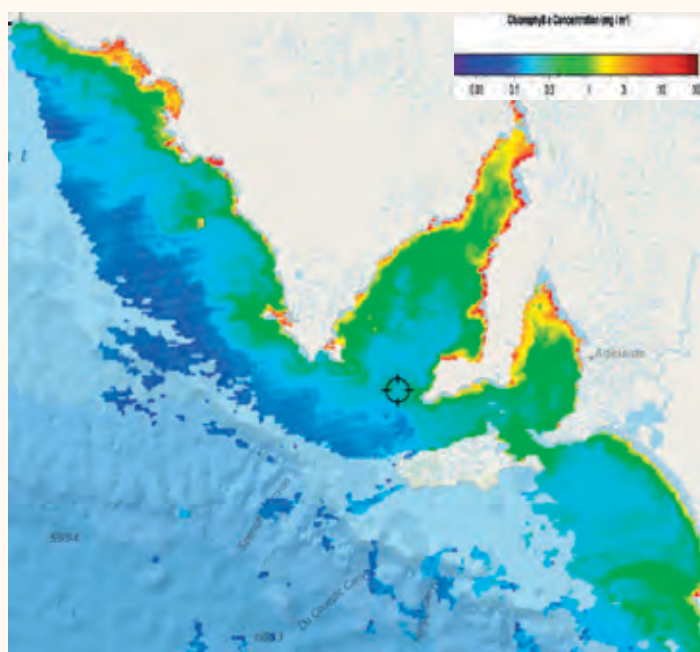


Figure 3: 11th December 2014—Chlorophyll distribution plot, area in bottom left is blank because cloud cover obscures the satellite view (FishTrack 2014)

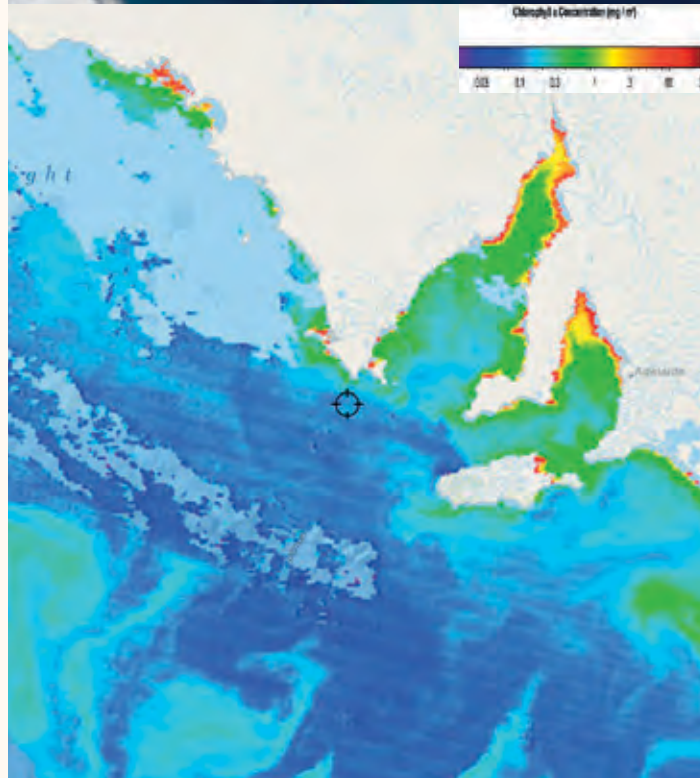


Figure 4: 7th January 2015—Satellite image (top) and corresponding chlorophyll plot (bottom). Clouds appear as white (top) and obscure the surface view; these areas appear blank in the lower image (FishTrack 2015).

application), these images are able to extend much further to the west than the FishTrack site. The satellite image shows increases in chlorophyll associated with the canyon systems of both Western and South Australia; there is also a large band that extends through the central Southern Ocean.

Climate Trends

Pacific Ocean System

This system continues to show a tendency for El Niño conditions but is unlikely to have any major influence over conditions experienced through the GAB area this summer (Figure 6).

Indian Ocean System

The IOD took a sharp swing to negative through early January – most likely exaggerating a warming of the waters to the northwest WA that occurred through November. This shift in the IOD is largely responsible for the storm activity and heavy rainfall that has occurred over the past week. The November warming occurred independently of the IOD climate system but has influenced the weather patterns resulting in deep troughs across the Australian landmass and mild air temperature conditions in SA through November-December.

The IOD system is forecast to remain neutral, with values tending back towards zero by March- April and in this state until September 2015 Figure 7.

The status of both the SOI and the IOD can be monitored on the Bureau of Meteorology website.

Useful Websites

www.bom.gov.au
www.csiro.au
www.fishtrack.com
www.oceancurrent.imos.org.au

Further Details

Kirsten Rough
 0429 833 697
kirstenrough@bigpond.com

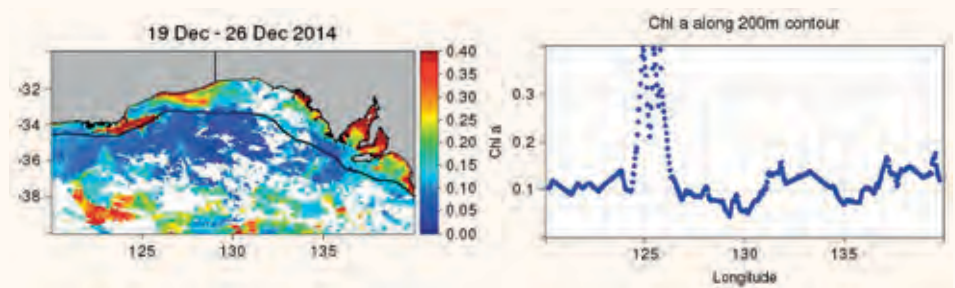


Figure 5: Chlorophyll concentration along the 200m-depth contour across the GAB area from longitude 120° to 140° (CSIRO 2015). Note the colour scale used on this website is much finer scaled – red here is equivalent to the green in the FishTrack images.

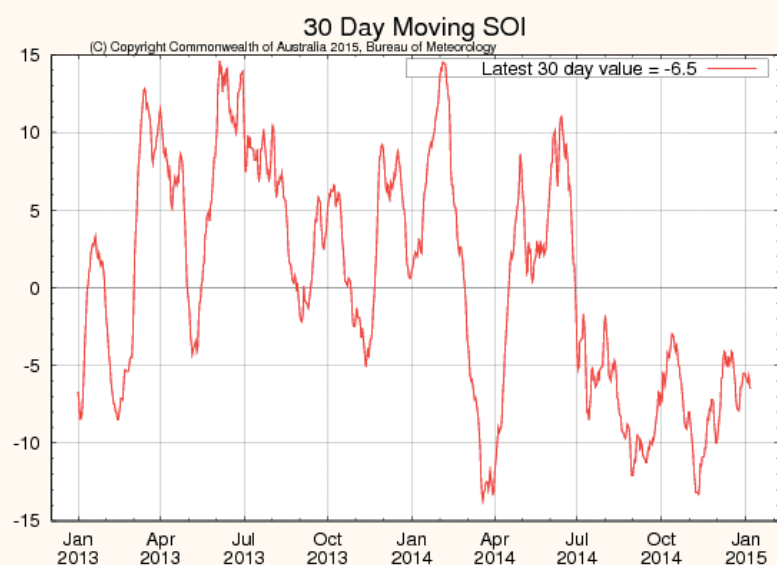


Figure 6: Southern Oscillation Index through the period January 2013 to present (Bureau of Meteorology 2015).

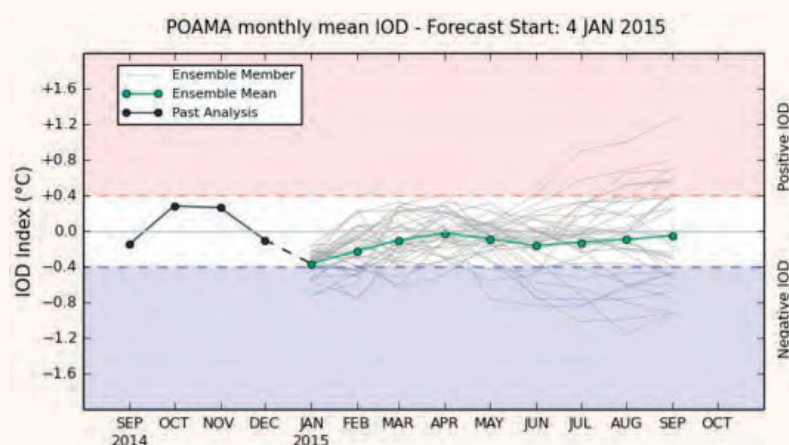


Figure 7: Bureau of Meteorology forecast for the Indian Ocean Dipole (BoM 2015).

Bay Representative Reports

Haslam

2014 was one of the quieter years at Haslam, with both a slow start and early finish. Oysters produced have been of excellent quality though. We are busy cleaning baskets, adding risers and fixing lines getting ready for this year. Interestingly, while food counts have been very low, growth has been steady and the oysters are very looking healthy and behaving themselves.

Wishing you a prosperous 2015.

Greg Window

Coffin Bay Report

The end of the year...whoosh! And now the beginning again.

I feel it is fair to say 2014 was a challenge to many in Coffin Bay, and other bays. A slow start or 'no' start in 2014 followed many growers as the months ticked on.

Understanding the environment and having a proactive approach to growing and conditioning is one strong message for me. Food counts and percentage of diatoms only give an indicator of 'something' and I look forward to the day when it brings husbandry knowledge along with temperature, salinity and other factors all intertwined in the complex marine environment we work in.

Some work is happening in this area which is good news.

Summer is most definitely upon us now, albeit a cooler November and December to herald it in.

I welcome Bill Stenson as the SAOGA Coffin Bay representative. An oyster farmer with a long history in Coffin Bay, his knowledge and experience will be a great addition to both our executive and industry.

May 2015 bring favourable conditions for ALL!

Cowell

Greetings all from Franklin Harbour, not a lot to report this time around. We have seen a rapid rise in water temperature over the last month which has really stimulated growth. Diploids are well into their spawning cycle. Conditioning has been steady without being outstanding. The recovery of oysters after grading is very good with very low mortality rates across the bay. While some new season mussels have been reported around leases, settlement does not seem to be as bad as last year. All in all it is business as usual, head down and getting busy.

Carl Jaeschke

Denial Bay

Happy New Year to you all.

Once again the year has started with a bang for all the growers in Denial Bay. WTF seems to be the common statement! It never ceases to amaze me how much growth happens over that 10 day period between Christmas and New Year. The food counts from SASQAP before Christmas where after all an incredible 4,879,000 cells p/litre so it shouldn't have been too surprising. Now we have the monumental task of getting on top of it all. It is a good problem to have, much better than the alternative.

Generally speaking our growers had a good season with growth and conditioning, but unfortunately the season was marred by SAMS over the winter months when the food counts plummet to around 8800 cells p/litre. This feast or famine type of food availability seems to be a fairly obvious contributor to the SAMS plight. Some growers are concerned that it seems POMS has to a certain extent pushed the SAMS research into the background. Hopefully 2015 sees the effects of SAMS considerably reduced for everyone.

The spring summer period seems to have been windier than normal making it difficult at times to get to St Peters Island. Let's hope it calms down over the next

few months, but not too much as the wind is our friend when we need it. Basically we are whinging farmers, complaining when it's too windy and then complaining when it's too calm!

I hope 2015 is kind to you all with some long periods of smooth running.

Gordon Gardener

Streaky Bay Report

I would like to wish everybody a happy and prosperous new year.

Despite a slow start last year, we have had a reasonably good season. Growth and conditioning have been good since April last year with exceptional growth being experienced over the last couple of months. The only danger at the moment seems to be the flatworm, which have been abnormally active this year, requiring quite a bit of adjustment in growing heights.

We have to say farewell to Ian Weber of South Sands Oysters, who has sold most of his leases and is leaving the industry. We would also like to welcome the growers who will be operating those leases in the future.

On the industry front, it is pretty upsetting to see the problems we are facing at the moment with the issue of rubber bands. This problem should not be occurring if growers adhered to the code of practice and took care not to pollute their environment with such things. Rubber bands have long been an important part of our industry, without any problems being experienced in the past.

Reg Brown

Yorke Peninsula Zone

Busy as usual at this time of year. We are coming towards the end of "Blow"vember in our region and the weather has been like an early October weather pattern. There is some conjecture whether this pattern will have an effect on growth rates.

Yet again – Stansbury Oysters enjoy exceptional survivability. We may not have the same waters for conditioning and we may not have the best shape, but as on-growers we seem to be able to grow some gnarly, mongrel oysters that have high survival rates.

On grown sales are pretty much over for the year and thoughts turn to maintenance, post replacement, new lines and Christmas sales to the local market.

In terms of marketing, growers in conjunction with the Progress Association and YP Tourism are planning an “Oyster Riot” – along the lines of the Sea and Vines Festival in McLaren Vale.

The “Sea and Taste” is in the early stages of planning and all growers hope that it gains traction amongst all sea food producers on Yorke Peninsula.

In other news, Stansbury in particular and the oyster sheds has been visited by Senator Anne Ruston (SA Senator) looking at Industry Development in Regional SA and by the ABC Country Hour looking at Primary Industry on Yorke Peninsula.

We continue to support local school activities (as the next generation of Growers, consumers, politicians and “captains of industry”) may come from amongst these groups

The local school – Stansbury Primary School, one of 3 schools in SA, sent a student delegation to a National “kids teaching kids” conference in Perth. Their topic was “Ocean Acidification and the impact on Stansbury Oysters”.

This is a very prestigious event and their attendance was supported by the Stansbury Progress Association and Southern Yorke Oysters

In addition, the Yorketown Area school – Year 9, are doing units on Aquaculture and are busy planning trips out to the leases and a look into our sheds.

Finally, on the educational front (probably due to YP’s proximity to Adelaide) – Southern Yorke Oysters are hosting Flinders University Aquaculture students on placement. They are required to undertake these placements, as a part of course work to get their degrees. It seems a good source of “free labour” – although in my experience – very few things are free in this world!.

On other educational research related topics – Shaun Henderson (studying for his PhD)–working on a “Trace elements” project to determine what oysters eat – has completed his field work on YP and is collating the results.

Stansbury has also joined the University of Sydney – Professor Richard Whittington’s POMS research project with the deployment of a data logger in the bay.

The planning for the Stansbury Seminar in 2015 is well under way.

Whilst I am unable to promise the return of Phil McEvoy as the “Make-believe Diva”, I can confirm the return of “YP Wood Oven Pizzas” for the “Welcome family night on the first night.

To all growers and their families and those associated with our industry – every best wish for the New Year.

Steve Bowley

Smoky Bay

The past six months in Smoky Bay has seen Oyster Growers and Community members alike in busy mode. In August our little Community was privileged to be visited by the WA Variety Bash. Our hard working Community and Oyster Growers alike turned it on. Everyone pitched in to not only spoil our visitors with the local produce but enhanced the image of Smoky Bay Oysters, giving our industry across the state a healthy boost.

October saw our Annual Oyster Fest. Holding this event is a major undertaking by the Oyster Growers from Smoky and

Ceduna. The Zipple Family, Bruce, Gary and Ashley once again supplied the highest quality oysters. As a Community we sincerely thank the Zipples for the time and effort they put in to keeping this event running and providing the best produce available. Judd Evan must also be mentioned, he is an enthusiastic member of our Oyster Community and without his coordinating efforts the weekend would not come together as it does. Juddy is just one man but he is worth 10 on any front line. Thursday and Friday before the event seen 20 odd volunteer oyster growers opening and packing 1700 dozen oysters. On Saturday and Sunday the Oyster Tent was ably manned by very capable Oyster Growers and Labourers selling all opened oysters plus 100 dozen closed oysters. Our gratitude goes to all who help in any way to make this weekend the success it always is.

As new Bay representative this year I would like to acknowledge and thank Garry Zipple for his time as our Bay representative and also his efforts as one of the founding Directors of the Australian Seafood Industries Program along with the SA Oyster Research Council. Garry is a valuable member of our Community and we look forward to his continued support as we move forward.

Within the Bay this year the food count has been quite inconsistent, despite this most Growers are still selling a quality product on a regular basis. Some areas are beginning to fill spawn. With low tides and good weather many growers are completing their maintenance and building programs and leases are looking tidy and well maintained.

Wishing you a very prosperous new year. Looking forward to a catch up in August at Stansbury.

James Boylan

Classifieds

Sydney Rock Oysters

At least one grower has submitted an expression of interest with PIRSA to grow Sydney rocks from a hatchery based in Albany W.A. If approved they will be purchasing 2 million spat direct from the hatchery.

Expressions of Interest: Lease or Purchase

5ha of water in
South Bank / Perlubie

- LA00004 2ha
- LA00005 2ha
- LA00006 1 ha

2.5 ha North Bank / Haslam

- LA00012 2.5ha

All enquiries to Kristy on 0419811555

Leases for Sale

We are not far from retirement and would like to sell our leases to someone who is keen to have a future in the industry. We have two - 1 hectare leases for sale along with corresponding licences. Both have infrastructure consisting of posts and wires, but no baskets. We will provide GPS marks and photo for those who are interested. The hectares are situated at Southbank Streaky Bay, South Australia.
Peter and Dianne Haywood
Mob 0428849624 Hm 08-87258008

Baskets for Sale

- 2/3000 17 mm pillow oyster baskets sims clips \$1.00 each
- 4/600 12 mm pillow baskets 10.5 duck clips \$1.00 each
- 2/300 3 & 6 mm pillow baskets 10.5 duck clips \$1.50 each

All in good condition

Phone Jack 0428 982 443

Oyster Leases for sale - Streaky Bay

Hummocks growing region - 5 ha fully developed
Blancheport growing area - 5 ha 1 ha developed
1 ha land based facility
3 Bedroom House
Plus sundries

Sale Price \$900,000

Phone David 0428 261423

Units For Sale

Approximately 1000 units in Streaky Bay. Unit stakes are still in good condition. Make an offer.
Phone Reg 0427261517

Stick Baskets For Sale!

\$3 EACH

17mm & 12mm

Contact Pete: 0488 039 766

Grader Wanted

I'm looking for a grader for grading juvenile stock with elevator to suit.

Preferably shaker or double barrel that can handle a good amount of capacity

Zac - info@angeloysters.com.au, 0427891200

Wanted: Rotary grader

coke cylinder with holes for approx. 8ml to 40 ml oysters. Anyone got one surplus to needs? Let me know cost

Phone Jill 0427277417

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Jedd Routledge

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Streaky Bay

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Yorke Peninsula

Steve Bowley

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Ph 0403 572 750

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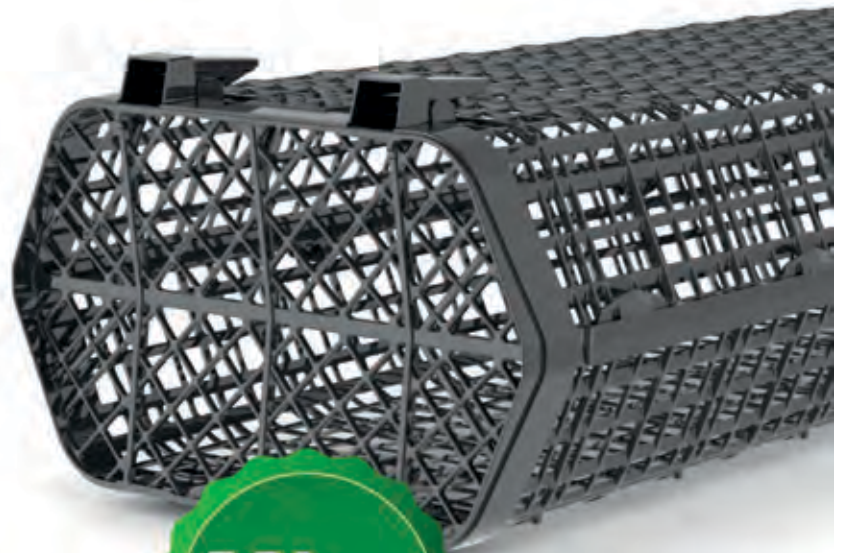
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 - ✔ 10 year minimum serviceable life*
 - ✔ Unique ultra tough plastics used
 - ✔ Impact resistant in sub zero climates
- ✔ Suits high & low energy tidal areas
- ✔ Larger Baskets (25 litres, 6.6 Gallons)
 - ✔ Greater stock density
 - ✔ Up to 40% improved productivity
 - ✔ Reduced operating cost
- ✔ Larger flat "footprint"
 - ✔ More even stock distribution
 - ✔ Improved stock quality
- ✔ Suits a wide range of shellfish growth sizes
- ✔ 5 Basket sizes - 3, 5, 10, 15 and 20mm mesh sizes
- ✔ Access door at both ends of basket
- ✔ Quick simple assembly
- ✔ Each basket handles up to 10kg(22lb) of stock
- ✔ Multiple attachment options and positions
 - ✔ along the line or across two lines
- ✔ Suspension Clips fold flat for transport and storage
- ✔ Also available
 - ✔ Stick adaptor for rack & rail systems
 - ✔ Clips for existing soft mesh baskets
 - ✔ Post Riser Clips, Vexcyl Line, Oyster tube
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