

POMS UPDATE - SUMMER 2016/17: # 5 - FEB'17

This is another update on what has happened over recent weeks with POMS on Tasmanian oyster farms. Please note that we are using the information that is currently available to us, but it is not an official record of events. In addition, it may contain comments on research that is not yet completed and so not necessarily the final story.

BIOSECURITY TASMANIA - JOHN PRESTON

SUMMER SURVEILLANCE TESTING

Since the last newsletter was issued, the Summer Surveillance Testing results for Great Bay on Bruny Island are in and the good news for those oyster growers, and in fact all growers in the D'Entrecasteaux Channel, is that the results were all negative for the testing conducted at that time.

Following receipt of the test results I had a very well attended and constructive meeting with members of Bruny Island Shellfish Growers Association discussing the significance of the test result and the resulting continuance of the POMS Zone classification for their area. Biosecurity Tasmania has determined to leave the classification as Intermediate, notwithstanding the negative result for this particular test. The reasoning behind this is due to the proximity of a known infected area (Hobart Port), within reasonable proximity to the test area on Bruny Island.

Last week I undertook Summer Surveillance testing in Great Oyster Bay and again the results for this test have come back from the lab as negative to the PCR test on the day. Again, the POMS Zone classification will remain as Intermediate due to the proximity of a known infected area.

The next area to be tested will be Dunalley Bay followed by Eaglehawk Bay as long as water temperature remains in the appropriate range. These last 2 areas once tested will complete the targeted Summer Surveillance Testing Program for this summer.

The only sampling and testing that will remain for this year will be the re-test of the previously tested "Free" areas to ensure that those areas remain free heading into the cooler months of the year.

ZONES AND CLASSIFICATION ARRANGEMENTS

I have been asked several times lately about the differences between Zones and how classification of areas are determined. I will try and provide a simple explanation.

Zones were created soon after the POMS virus was first detected in Tasmania as part of the mechanism that allowed the continuation of the movement of oysters around Tasmania. Three zones were identified based on evidence of POMS virus and the assessed level of risk of introduction of the disease.

The zones are

- **Test Free Zone.** Areas where there is no evidence of the disease, surveillance testing has not detected any evidence of virus and the area is not in close proximity to known infected areas.
- **Intermediate zone.** There is no evidence of disease. There may be PCR evidence of virus at low levels (with the absence of disease), or the area may be at the risk of introduction of the virus through natural spread.
- **Infected zone.** Evidence of the disease and PCR test positive for virus.

In conducting the summer surveillance testing program it is important that sufficient samples are tested across different stock size and age profiles on the individual leases across the whole of the test area to give an acceptable confidence in the results obtained. To assist in working out what exactly is required to provide a reasonable sample that will provide a high level of confidence, specialist advice has been taken from Biosecurity Tasmania's Veterinary Epidemiologist. This advice specifically determines which size ranges need to be sampled, the number of each size range sampled, the number from each lease sampled and the total number of oysters to be sampled for that particular area to deliver an acceptable confidence in the results.

To summarise, the summer surveillance testing results to date are as follows:

Area	Test result	Classification	No. sampled
Circular Head	Negative	Test Free	90
Port Sorell	Negative	Test Free	30
Georges Bay	Negative	Test Free	70
Great Bay	Negative	Intermediate	30
Great Oyster Bay	Negative	Intermediate	30

I think it is important to note at this point that the cost of PCR testing is expensive, with the cost for each batch of 30 oysters tested being approximately \$2000.

CONFIRMATION TESTING

In addition to the summer surveillance testing as previously described, Biosecurity Tasmania has also undertaken specific testing for the confirmation of POMS in each of the areas where a POMS like disease event was reported for the first time in this 2016 - 2017 summer.

This meant that one confirmation test consisting of a 30 oyster PCR test was undertaken in each of the areas in which POMS had been present in February 2016 and where POMS was again suspected in 2016 - 2017. Once confirmed there is no further testing undertaken in those areas.

POMS - THE CURRENT SITUATION

This summer continues to underwhelm in terms of warm, sunny days and this has resulted in cooler than expected water temperatures. This of course contradicts markedly with last summer and makes trying to predict POMS disease events a nightmare. That said, the summer while nominally ending this week, is not completely over in terms of warmer days

that we can reasonably expect to have through March, which in turn may result in higher water temperatures. In other words, I wouldn't shut the gate just yet on seeing POMS activate this summer but it is becoming increasingly unlikely.

As always, if you do experience any unusual mortality events on your farms, in the first instance contact me on the numbers below. Additionally I am still keen to hear from anyone in the known infected areas on updates or information about the virus on their lease or within their bay that can help provide a greater understanding of what is going on.

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 Email: john.preston@dpipwe.tas.gov.au

DPIPWE - Kevin Ellard

Plankton sampling began in the Hobart port, Blackmans Bay and Pipeclay regions during January. Sampling will continue each month in an attempt to determine if POMS virus can be detected in the absence of disease on farms. Samples will be temporarily stored until CRC funds become available and allow laboratory testing. During this interim period sampling is being privately funded. We hope to compare plankton test results with mortality rates found on farms by Christine's group.

UTAS IMAS - CHRISTINE CRAWFORD and SARAH UGALDE

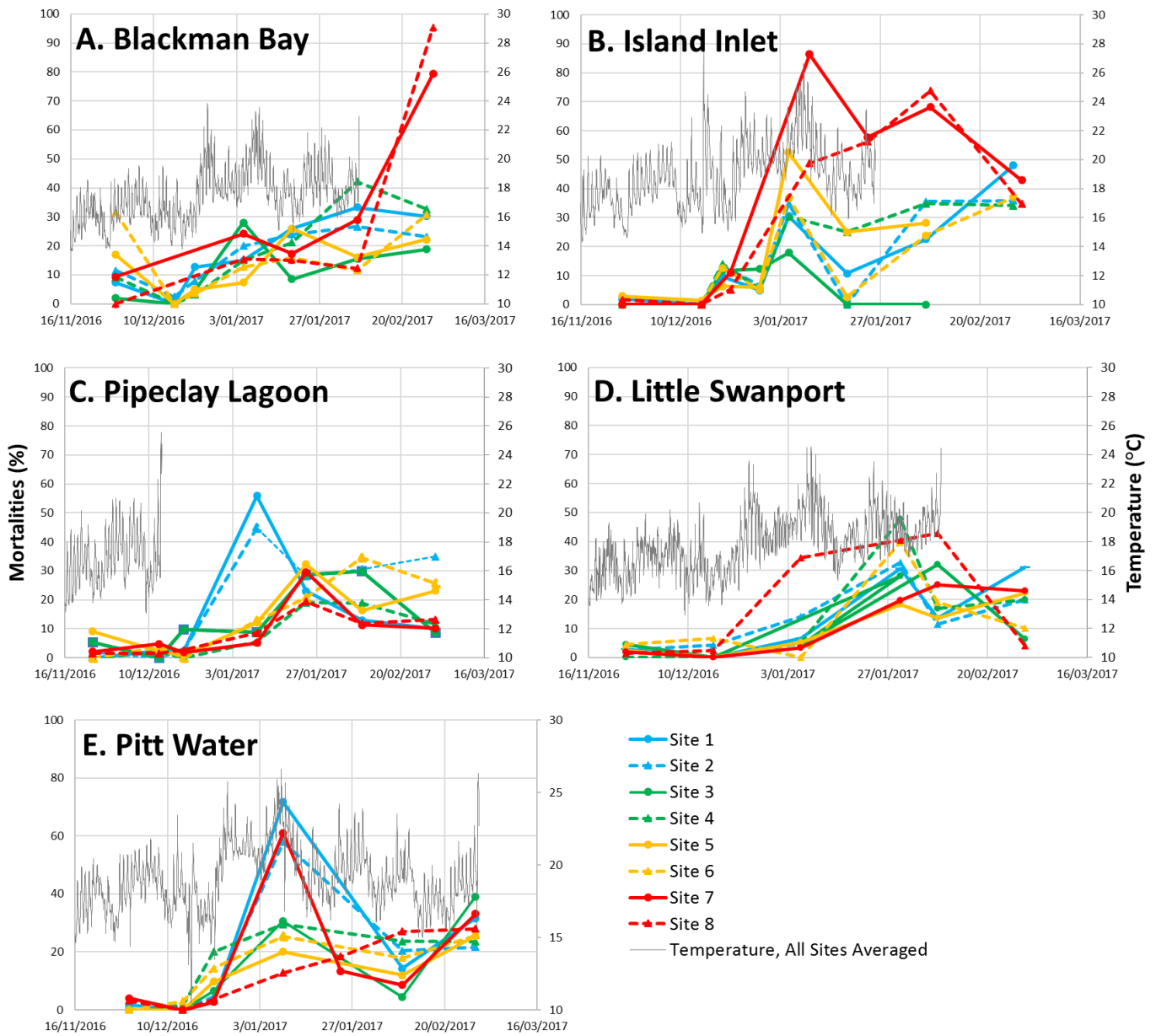
WINDOW OF INFECTION STUDY

Results to date are shown in the figures below. The temperature data are from our loggers that we placed in tubes alongside the sentinel spat. We do have more data from Pipeclay Lagoon, just haven't recently retrieved our loggers from that area.

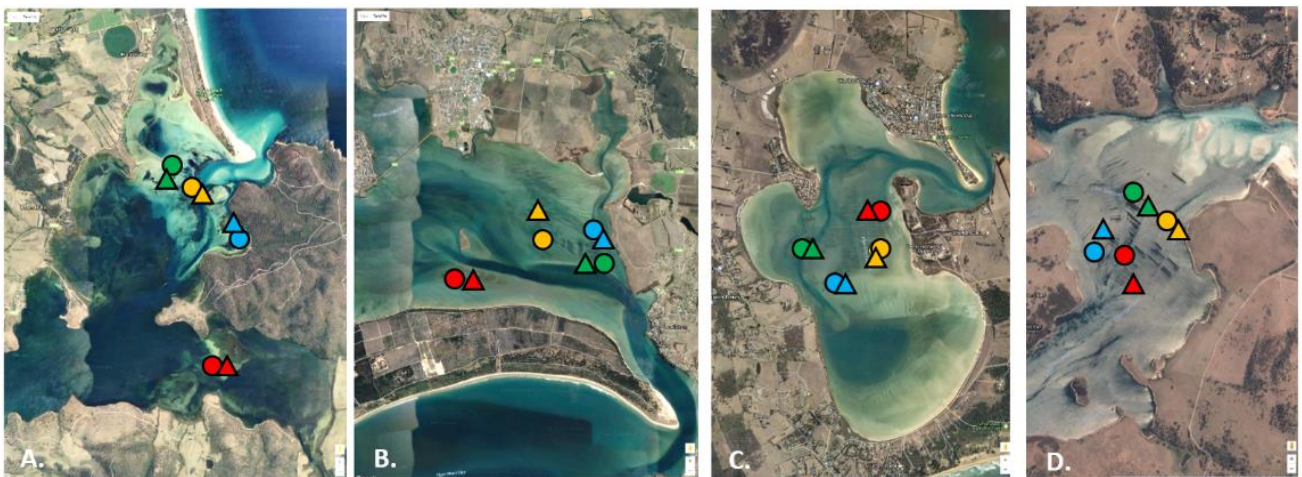
Last week the remainder of our sentinel spat (EBV 42) were deployed at each of the five sites and we will retrieve them in two weeks. As this is the last of our spat for the window of infection project, we will probably also remove all our gear at this time, depending on weather conditions. We will then analyse all data collected and provide more comprehensive temperature information from all five growing areas, including temperatures at each site. This week we are sending oysters from each sampling occasion to the University of Sydney for PCR analysis and we will provide this information along with the temperature data to industry, probably in the next newsletter.

POMS MORTALITY EVALUATIONS

The weather is never predictable in Tassie! A number of farmers in infected areas had ordered new spat to place out on their leases in early March, thinking that POMS would be over by then. However, the warmer weather at the beginning of March has caused a bit of a dilemma, and several farmers have opted to delay deployment of new spat and assessments of mortalities. We hope to be working with several of these farmers to conduct mortality assessments when the water cools down.



Spat mortalities (%) from all five locations; A) Blackmans Bay, B) Island Inlet, C) Pipeclay Lagoon, D) Little Swanport, and E) Pitt Water. Note: Pitt Water map coordinates not available at this stage



As previously mentioned, please keep records of your observations in relation to the POMS outbreak. Any questions of us or information to pass on, please give us a call or send an email. Btw, our grant has finally been signed off so hopefully we will get some funding in the next couple of weeks!

Contact: Christine Crawford: 0428 277 222 or Christine.Crawford@utas.edu.au

Sarah Ugalde: 0467 750 337 or Sarah.Ugalde@utas.edu.au

ASI - MATT CUNNINGHAM

Hi All, just a short sharp one this month!

ASI is currently in the process of supplying hatcheries with commercial broodstock animals from the YC15 year class of families. This year class has been challenged in Pittwater, Pipeclay and Georges River (NSW) and survival data collected. As a result, EBV's (Estimated Breeding Values) have now been calculated for all families in this year class. This gives a measure of relative performance so that we can identify the best families to be commercialised. The hatcheries have been provided with a list of available families, the EBV's and a breeding calculator tool which allows the hatcheries to predict performance and inbreeding. The calculator shows that the best crosses from this year class have a predicted survival upward of **90% as 1 year old animals**. The only negative is that these animals are still some way off being to a size where they can be used as commercial broodstock. ASI is holding large numbers of these broodstock at the moment and our ability to maximise growth is somewhat limited so as a result we are transferring to hatcheries to manage this process. Additional elite YC14 families will also be supplied as part of this process.

SHELLFISH CULTURE LIMITED - SCOTT PARKINSON

SCL staff have been busy over the past year dealing with the devastating impact of POMS like the rest of the Tasmanian industry. Our focus has been Biosecurity, facility upgrades, staff training, selective breeding, understanding POMS and the establishment of Eyre Shellfish in South Australia. A milestone for the company and industry in Tassie was the sale of disease free spat to POMS free areas over the past couple of months as a result of our biosecurity hatchery status. We have been inundated with orders and delivered both Spawnless and Thoroughbred stock to the northern growing areas as well as many intermediate areas.

Our learnings from this year have demonstrated how unpredictable POMS is - with leases, bays, age of the stock and different batches suffering very different levels of mortality. What is evident though is genetics will play the most important role in our recovery; farming methods and regions are important and will influence survival but you need a base level of resistance in the stock to survive. We have supported many CRC projects this summer and I feel we have few answers and many more question than 6 months ago. What will be important is the sharing of information from this summer and then industry assisting in the future direction of research work that needs to take place in the coming years.

Note: other hatcheries will provide updates in future newsletters