

# **POMS UPDATE - SUMMER 2016 # 2 December**

This is the second update on what is happening in Tassie. We are collating the information that is currently available to us; however, this is not an official record of events.

## **BIOSECURITY TASMANIA - JOHN PRESTON**

### **POMS outbreak confirmed in Pitt Water December 2016**

The first confirmed case of POMS has occurred in the summer of 2016 with a grower in upper Pitt Water experiencing significant mortalities of harvest oysters on the 7<sup>th</sup> and 8<sup>th</sup> December. PCR testing of these oysters confirmed POMS. Of interest was the amount of virus found in these samples noted as being particularly high.

Over the course of the next few days mortalities of differing levels were noted in various lines of oysters on both this farm and to a lesser degree on another lease under the same ownership in Island Inlet.

Mortalities ranged from less than 5% to greater than 95% over various groups and these numbers are continuing to change. It will be some time before the final mortalities and more importantly the number of survivors are known. It is also too early to speculate which particular lines have performed better than others.

All of these numbers will be analysed with great scrutiny at the end of summer.

Reports of significant mortalities are now being received from other farms in Upper Pitt Water and I expect this to continue throughout leases in both Upper Pitt Water and Island Inlet.

The POMS virus surprised by activating in a water temperature range of 18 – 19 °C when we had been expecting nothing to happen below 20 -21 °C as it was last summer and as it is consistently in the Hawkesbury river in NSW. It also activated in a different part of Pitt Water, although this makes more sense.

At this point in time we don't know if we are only going to have one wave of virus as occurred last summer or can we anticipate additional waves? Only time will tell as we learn more about how this virus is going to behave in Tasmanian waters.

I have contacted all Pitt Water oyster growers directly since this outbreak and will continue to have close communication with them. Speaking of communication, I have been really impressed with the assistance I have received from Pitt Water growers who have provided me with regular email updates on the progress of the virus on their farms, including observations that they have made around the circumstances and the behaviour of the virus. These things can all be collated at the end of summer and may possibly provide clues as to early warning signs or other useful information in relation to the behaviour of the virus.

Therefore, I would ask that all growers when faced with POMS or any unusual behaviour of oysters on their farms to not only let me know immediately, but also as time allows record

their observations of the virus as it happens and send to me as an email. Often these things will get forgotten over time if not written down.

For those that still do not know how to contact me, my contact details can be found in the PERMITS section of the newsletter below.

## **SUMMER SURVEILLANCE PROGRAM**

And now for some better news, we have started our POMS Summer Surveillance Program where we take samples of oysters from areas that have had sustained temperatures over 18°C for 18 days. So far two areas have met this requirement, Port Sorell and Georges Bay.

I collected the samples from Port Sorell on 7<sup>th</sup> December and we were looking at this area for proof of freedom testing as it is one of only 2 POMS free areas in the state. PCR testing of these samples returned a completely **negative result**, which is fantastic news for the Webb's but also for the Industry.

The Georges Bay samples were only collected Monday and Tuesday this week and the PCR test results are not expected until Friday. Everyone in Georges Bay is hoping for a "special present" from Santa this year. I am sure everyone feels the same for those growers. After the Georges Bay growers have been notified, results will be advised through our next newsletter.

## **HATCHERY BIOSECURITY AUDIT PROCESS UPDATE**

In the period since our last newsletter, Shellfish Culture Ltd has completed all of the steps required to become a bio-secure facility at its Pipe Clay Lagoon Hatchery site.

This process included preparing a bio- security plan to the satisfaction of the CVO and then having its facilities and processes audited satisfactorily against that plan by an external auditor.

Finally, evidence of all of these steps including the auditors final report were provided to the CVO for his final sign off, which was given.

Shellfish Culture Ltd has done an incredible amount of work to achieve this position and are to be congratulated on becoming the first oyster hatchery in Australia to be recognised as being a bio-secure facility.

Other hatcheries in the state are at various stages along that process and assistance has and will continue to be given to those hatcheries that wish to achieve biosecurity status.

## **PERMITS**

As all existing movement permits expired on 31 October, I urge growers to make **application** for replacement permits by emailing your application to [POMSTas@dpipwe.tas.gov.au](mailto:POMSTas@dpipwe.tas.gov.au)

Application forms for movement Permits may be found at [http://dpipwe.tas.gov.au/Documents/POMSPermitApplication\\_18022016.docx](http://dpipwe.tas.gov.au/Documents/POMSPermitApplication_18022016.docx)

Permits will be granted in most cases until 31 March 2017 but may be revoked earlier if required.

**Contact:** For any POMS related matters please contact me on [0428 504 150](tel:0428504150) or [6165 4825](tel:61654825), or email [john.preston@dpiwwe.tas.gov.au](mailto:john.preston@dpiwwe.tas.gov.au)

## **UTAS IMAS - CHRISTINE CRAWFORD with the two Sarahs**

Our project investigating the period of infection with sentinel spat placed in the five infected areas, Blackman Bay, Upper Pittwater, Island Inlet, Little Swanport, and Pipeclay Lagoon has been going well. These sentinel spat are in eight floating baskets spread around each growing area, as advised by the University of Sydney POMS researchers because the spat are likely to be exposed to the virus for longer when continually submerged. This also maintains consistency between sites. After the first signs of mortality in several growing areas in early December, we sent off four samples of oysters from each region for PCR analysis for POMS, but they all returned negative for the OsHV-1 virus, except for inconclusive results for two samples from Blackman Bay. According to Paul Hick from the University of Sydney, this means that 1 of 2 replicate PCR reactions produced a very high Ct value, which is best interpreted as a trace amount of OsHV-1 DNA being present.

With significant mortalities in Upper Pittwater reported on 8<sup>th</sup> December, we sampled all five growing areas last week (13-16<sup>th</sup> December) and then again this week (20 and 22<sup>nd</sup> Dec.). Our counts of mortalities last week showed low mortalities of < 10% at all sites, except for 24% mortality at two sites south of the channel at Island Inlet where spat had been in place for 4 weeks. Our results so far this week show higher mortalities at Island Inlet for sites north of the channel, averaging 12.9% (sites south of the channel are still to be sampled). At Pipeclay Lagoon mortalities were low and averaged 2.7%. However, the labs closed early last week so we haven't sent off any samples for PCR analysis at this stage.

We also started intertidal-subtidal comparisons at Blackman Bay and Dunalley Bay. 4 mm naïve spat were placed in top and bottom baskets of subtidal stacks and in intertidal boxes or baskets. We will retrieve a small sample of oysters to assess mortality and subsample for PCR analysis every few weeks, starting early in the new year. Many thanks to Camerons of Tasmania for providing the spat. Temperature loggers have also been provided to Melshell to put in trays at their subtidal lease in Great Oyster Bay.

It was suggested to us by an oyster grower that a meeting of farmers in mid-late January to discuss POMS events so far would be beneficial. We welcome feedback from other growers as to whether they would be interested in getting together at this time.

Contact: Christine Crawford: 0428 277 222 or [Christine.Crawford@utas.edu.au](mailto:Christine.Crawford@utas.edu.au)  
Sarah Ugalde: 0467 750 337 or [Sarah.Ugalde@utas.edu.au](mailto:Sarah.Ugalde@utas.edu.au)

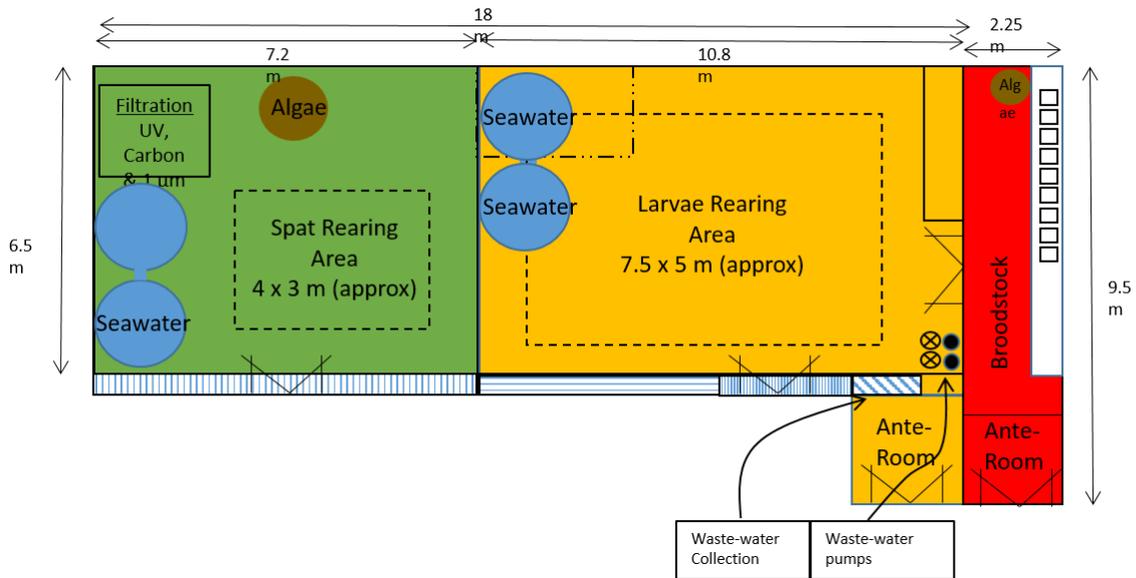
## **UTAS IMAS – Greg Smith and Andrew Trotter**

The IMAS biosecurity research facility is now fully refurbished and ASI YC16 family line production is running full-steam ahead in the facility. The timeline for the refurbishment was very tight, so much so, that ASI were moving broodstock in as the paint was drying on the walls! Going forward this facility represents a fantastic resource for undertaking high level biosecurity research including the requirements for ASI breeding and oyster research within the Future Oysters CRCp.

The revamped facility comprises three separate spaces, currently ASI are utilising them as a designated broodstock room, larval and spat rearing rooms (Figure 1). Both the broodstock and larval rearing rooms have designated anterooms. Water treatment is a key component of the facility. Primary water treatment comprises sand filtration, foam fractionation, injection of ozone, settlement, carbon filtration, further sand filtration prior to delivery to the hatchery. Water storage and secondary treatment is undertaken in the spat rearing room, where water is filtered removal of solids (1  $\mu\text{m}$ ), carbon filtered, temperature adjusted, and passed through 2 x 150 W UV sterilisation units linked in series. All wastewater is plumbed to a collection tank and filtered to 50  $\mu\text{m}$ , prior to pumping to the IMAS Waste Water Treatment Facility. Waste water treatment incorporates a hydroclone for further solids removal, ozonation and UV sterilisation to prevent the release of potential pathogens to the local marine environment.

Now that those works are completed, in conjunction with ASI, we are turning our focus to further development of our biosecurity protocols for holding and breeding from previously OsHV-1 exposed oysters. In the New Year we will begin some of our experimental works looking at depuration and disinfection techniques for breeding. Considering the experimental and lab work that is planned as hatchery components of the Future Oyster CRCp, we have had fruitful discussions with staff at the Molecular Genetics Facility (UTAS) to allow components of the molecular lab work to be conducted in-house to provide a quick turnaround for some of the testing required for experimentation. The Molecular Genetics Facility is part of the university's Central Science Laboratory, which is a tremendous resource centre for all sciences. So all-in-all it's all systems go for us as we get up and running with our POMs research work.

Schematic floorplan of the IMAS biosecurity research facility: Red area – challenged animals, amber – unknown status, and green – clean area.



View from outside the broodstock anteroom and ASI YS16 families in the larval rearing room.

## Oysters Tasmania - Neil Stump

### POMS Recovery Steering Committee Recovery Assistance Package

At the meeting of the Committee held on 24 November DPIPWE representatives provided an update in relation to the assistance package provided by the state and federal governments.

Of the 41 leases assessed as being eligible for assistance from the stock recovery package, 34 have lodged applications for assistance. There is approximately \$600,000 of the funding set aside for stock recovery that has not been expended. The meeting has recommended that the unspent funds should be allocated using the following criteria:

- to eligible leases affected in the January 2016 POMS event that have not already received funds in accordance with the amounts provided to other applicants (\$4500/Ha) and then;

- to growers affected in subsequent POMS events who are located in areas that were not affected by a mortality event in 2016

As previously reported, the concessional loan scheme has been undersubscribed. Industry members on the committee advised that after this summer growers will be in a better position to make a decision on whether to apply for a loan. Consequently, the committee agreed that Oysters Tasmania should write to the Minister requesting that the loans scheme remains open for an additional 12 months.

## **Recovery Strategy**

The committee agreed that the recovery strategy should be a living document where the focus is shifted from avoiding infection through an emphasis on biosecurity towards a document concerned with the practicalities of 'living with POMS'. That is not to say biosecurity is not important, particularly for the growing areas where the virus has not been detected to date.

It is anticipated that the next iteration of the strategy will have a focus on two main areas.

- An emphasis on farming strategies:
  - Education/bridging information focusing on farming strategies
  - Generalised information assembled into a living overview document
  - Explain the rationale behind each farming strategy; and
- An emphasis on financial strategies:
  - Explain the financial risk of different farming strategies
  - Present strategies to give growers the best chance to ride out the initial few years of POMS
  - Provide advice of what a recovery plan may look like for individual growers.

## **ASI - MATT CUNNINGHAM**

ASI activity has most recently been focussed almost exclusively around production of the YC16 families. The first 20 families were spawned on the 21<sup>st</sup> of November and these were followed up with another 20 families on the 23<sup>rd</sup> November. Although operating in what is essentially a totally new facility has presented some challenges, the spawning has largely been uneventful which is exactly what we hoped for. The larvae are doing all the right things and they will have gone into settlement by the time you are reading this update. The next lot of families will be spawned on Monday 12<sup>th</sup> and Wednesday 14<sup>th</sup> December and, if all goes as with the first run, will be setting the last of our larvae on New Year's Eve. Woohoo!!!

After the New Year we will be planning to grow the spat quickly so that we can get them up to a size where we are able to put them out in the field to get a POMS hit later in the summer. This year class has been exclusively bred from survivors so it will be interesting to see how they perform as small spat. An early hit on these animals will provide important data but also if we can get an extreme POMS selection event the surviving animals will become very important breeding stock for the program and commercial hatcheries.

## **NRM South**

We would also like to acknowledge the contribution by NRM South to support the Tasmanian oyster industry. They have prepared an excellent flyer and circulated it widely to the 'care' and community groups about POMS, especially the importance of cleaning boats and equipment, and not removing oysters during the summer period. A copy of their handout is provided at the end of this newsletter.

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Finally, it's been a very tough year for the oyster industry in Tasmania and we sincerely hope that everyone has a wonderful holiday at this time, with lots of love and laughter with family and friends. Also, our very best wishes for 2017, and for an uneventful and productive year.

For those of you that have to face up to POMS over the Christmas period, please feel free to contact John at all times on his mobile (0428 504 150 or by email [john.preston@dpipwe.tas.gov.au](mailto:john.preston@dpipwe.tas.gov.au)) I will be monitoring both every day.

Christine and John

## Pacific Oyster Mortality Syndrome (POMS)

DECEMBER 2016

### Advice to Landcarers, Coastcarers and Wildcarers

Pacific Oyster Mortality Syndrome (POMS) is now considered to be endemic in Tasmania. That said, there are some areas that are confirmed infected, some that are suspected or intermediate, and some that remain free of POMS.

It is essential from a Biosecurity perspective that all members of the community understand the restrictions on the movements of oysters within Tasmania.



In an effort to control the spread of POMS, a Movement Permit system is in place within Tasmania to control and regulate movement of oyster products and oyster equipment between the different classification areas.

Movements for human consumption and testing are exempted.

### More information

Biosecurity Tasmania (DPIPWE) have full details on the Movement Permit requirements and general fact sheets about POMS, which can be found here: <http://dpijwe.tas.gov.au/poms>



### Oyster removal activities should cease during Summer

Oyster removal activities could pose a transmission risk (on removed oysters or contaminated equipment).

We know that the disease activates with warmer water temperatures and has a higher risk of transmission during the summer months.

**For this reason any oyster clean-up activities should only be scheduled for the cooler months, between May and October.**

Great care should be taken with the disposal of any removed oyster waste, ensuring that disposal is not anywhere adjacent to or in marine waters.

### Clean boats and equipment

The virus can survive for long periods on boats and equipment—improved attention to boat cleaning helps reduce the spread of aquatic diseases and pests.

[CHECK, CLEAN, DRAIN and DRY](#) – see how you can help protect Tasmania from introduced aquatic threats.

### Report oyster deaths

Biosecurity Tasmania encourages all community members to report all suspected aquatic disease events so they can be investigated. Any unexplained and significant mortality of oysters (greater than 5 percent) should be reported to:

Biosecurity Tasmania

1 Franklin Wharf

Hobart TAS 7000

Phone Office Hours: 03 6165 3085

Phone after office hours: 1800 675 888

Email: [POMSTas@dpijwe.tas.gov.au](mailto:POMSTas@dpijwe.tas.gov.au)

ADDRESS: 313 Macquarie Street, Hobart, TAS 7000

PO BOX 425, South Hobart, TAS 7004

03 6221 6111 | FAX: 03 6221 6166

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