

MAY– JUNE 2021



Gloomy weather on the horizon for our June monthly sampling expedition.

IN THIS EDITION

All facets of the farm continue to be busy as the hatchery closes and we transition to harvest time. Tourism ramps up and KMRS welcomes guests and a new intern.

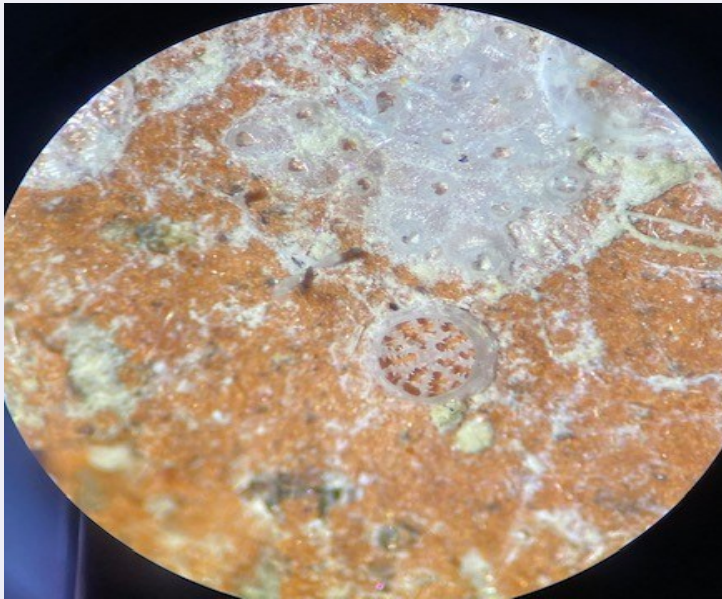
STAFF NEWS

May and June saw the departure of Kate and Lauren as they move back to their home towns to pursue new adventures. This has meant KMRS has recruited a new intern, Chloe, who just recently graduated from Murdoch University where she studied a Bachelor of Marine Science & Genetics.



Pearls found from two adult oysters during this month's oyster health sampling.

NEWS FROM THE RESEARCH STATION



Small coral recruit found on a coral recruitment tile from Shell Island in June.

Coral & Rock Oyster Monitoring

With the roll over of another month, we carried on with our rock oyster recruitment research project, which monitors the settlement rates of rock oysters and our coral recruitment project which allows us to monitor and compare recruitment in the subtidal and intertidal coral populations here at Cygnet Bay. For this months coral recruitment analysis we found evidence of successful settlement by Poritidae, Pocilloporidae and Acroporidae species at all three locations. Coral recruitment is a complex process that can be affected by multiple natural and human induced factors. At KMRS, we recognize the importance of monitoring the rate of coral recruitment for the future resilience and recovery of our local reef systems. The diversity of coral recruits for this month is a positive sign for Cygnet Bay.

CRC Research and JCU

JCU are back! The last weeks of June saw another visit from the JCU team which saw Julie, Dave and Cecile come to the farm to help with tagging and swabbing. We were very fortunate to have them on board for a full week where they worked closely with our hatchery and pearling team, taking essential measurements, inserting tags, and getting DNA swabs for our ever growing database. The swabbing in particular is vital for our continual research on assessing the genetics and most viable broodstock pairs to spawn.



Monthly Sampling

This month Pat, Tane and Chloe set out to collect water and oyster samples from our three sampling sites. We are pleased to report that the oysters showed signs of good health. In particular, we are thrilled with the condition of the two spat oysters. These spat oysters were born and bred in the hatchery here at Cygnet Bay. The team were also pleasantly surprised when they discovered that two out of the three adult oysters were housing precious pearls.

AROUND THE FARM

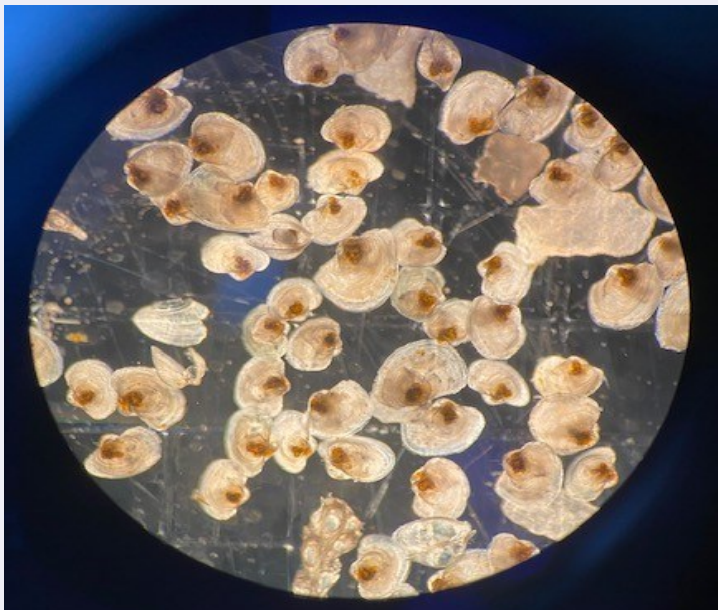
Hatchery & Algae Lab

The hatchery continued to be in use following the spawning event in April, with spat being constantly cared for by our algae and hatchery team. The spat were kept from the end of April to the start of June within our hatchery tanks whereby they were fed and had regular water changes. Three different species of algae were cultivated and fed to the baby oysters with the quantity of each species being dependent on the developmental stage of the spat. After a few weeks the spat develop their foot which is used to attach themselves to a substrate. At this stage the hatchery team will introduce sterile rope panels into the tank, to which the spat will attach to. These panels are kept in the hatchery for another few weeks and then they are deployed onto our farm before being destocked in a years time.

Destock

Destocking refers to the removal of oysters from one panel type to another after they have over grown their current pocket. This occurs to spat when they are removed from their protection bags and placed into 15 pocket panels. This occurs approximately one year after they are deployed when they are 40-60ml big. The spat bags are a thriving little ecosystem at the time of destock with them being covered in many different species of algae, corals and bivalves. With this, they are also home to feather stars, brittle stars, and predating fish, crabs, and octopus.

The destocked spat this year have all been in great health with the bags producing high numbers and a great size range. This is a positive sign as we continue to monitor and prevent the negative impacts that come from the mysterious marine virus which targets juvenile oysters.



Juvenile spat under the microscope before being placed in the settlement tank (Left). One year old spat during destock (Right).

MORE FROM AROUND THE FARM

Pearling Operations

The crew has been working around the clock between weather windows, cleaning lines, deploying spat, and destocking panels. Poor weather has made working conditions hard, however we are fortunate enough to have fantastic skippers and deckhands to make light work of all tasks.

Have you got your EyeOnWater?

Did you know pure water appears blue because of its absorption at the red wavelengths and scattering at the blue wavelengths of the visible spectrum?

Any changes from the blue colour is an indication of other material in the water like algae (green) or organic material (brown). CSIRO have created a water quality app which allows anyone with a phone to contribute observations that help scientists evaluate the health of the water. It is as simple as taking a photo of your local water body and comparing it to a set of colours! For more information see the link below and download the EyeOnWater app from your Apple or Android app store.

<https://research.csiro.au/eyeonwater/>



Some of the pearling crew assessing conditions on a beautiful, cool dry season morning.



One of our pearlers, Lucas, opening a spat bag for destock.

Weather

Dry season is well and truly among us! Easterly winds have made their presence bringing chilly mornings and hard working conditions.

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