



KIMBERLEY MARINE

RESEARCH STATION • CYGNET BAY

SEPTEMBER - OCTOBER 2019



Corals exposed at Shell Island during the lowest tides of the year! Photo by: Ashley Bachert

IN THIS EDITION...

There has been a lot of exciting things happening over the last couple months. We got a new shipment of algae for October spawning, hosted a retuning research scientist, celebrated our annual harvest party and we were also caught on camera!

STAFF NEWS

Welcome back Meg!

With tourism season slowing down we welcome our previous intern Meg back into the hatchery as our algae and larval research technician! She has been very busy getting our new algae ready for spawning.

We also welcome two new interns Paul and Selva. Paul has come over from Germany to learn all about the unique Kimberley region. He currently working towards a Bachelor of Science in Ecology and Environmental Planning at the Technical University of Berlin. Selva arrived from Coffs Harbour, NSW to gain more experience in aquaculture. She has a Bachelor of Science with Honours specialised in the effects of ocean acidification on coralline algae.

Farewell to Josh, Ashley and Millie

We say goodbye to two more interns. Josh left us at the end of September. He is planning to do some travelling up the west coast as well as overseas. Ashley is headed off to gain experience turtle tagging at Thevenard Island before heading back to Canada. Millie our former intern departed back to England to finish her final year of studies, we hope to see her back in the Kimberley in the near future!



New Interns Selva and Paul enjoying the view from the lookout. Photo by: Ashley Bachert

NEWS FROM THE RESEARCH STATION

CRC Sampling

Our CRC project has been keeping us very busy! We have been working in the hatchery spawning a new family from our *Pinctada maxima* brood-stock oysters. Our brood-stock oysters have been identified as having the most resilient and desirable genetics. We aim to spawn from these oysters to improve the resilience of our oysters to the juvenile pearl oyster mortality syndrome. To aid the selective breeding process we spent a few weeks in the hatchery collecting samples from 2000 spat oysters. These samples were phenotyped on site and sent off for genotyping at James Cook University. The oysters were tagged after sampling, allowing us to pair males and females with the most favourable characteristics in future spawning's.

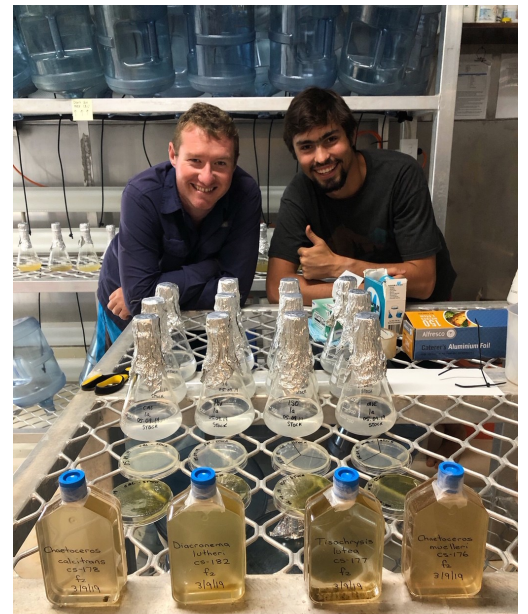


Gary, Josh, Meg and Ashley taking the last of the sampled oysters to be put back out on long lines. Photo by: Ashley Bachert



Left: Liam and Garata altering water temperature to get the of chosen pairs to spawn. Right: Male (white sperm) and female (yellow eggs) being released. Photos by: Ashley Bachert

can use to try and initiate the oysters to spawn. These include dropping and filling the water table to create dramatic water changes, increasing or decreasing the water temperature, or altering the pH. Although the oysters are in the hatchery, spawning can also still coincide with the tide. After successful spawning the eggs and sperm are collected and moved into larger tanks.



Gary and Josh excited about our new algae delivery! Photo by: Ashley Bachert

Algae lab

Arrival of new algae! The algae lab has been working double time, growing four different strains of algae to feed the new larvae. Feeding four different species of algae provides the oysters with a wide range of food in their diet. With each stage of growth, their diet will be made up of different amounts of each strain, to best aid their development.

Spawning Process

Once brood-stock have been checked to see if they are ready for spawning they are brought back to the hatchery and paired with an appropriate match. These pairs are then placed into individual sections of the spawning table. There are various techniques we

MORE FROM THE RESEARCH STATION

Coral Monitoring

As we start to enter the wet season we continue to keep an eye out for coral bleaching as air and water temperatures start to rise. In early October we welcomed back Dr. Verena Schoepf to the research station. Dr. Schoepf has been researching Kimberly super corals since 2014. In 2016 she witnessed and documented the coral bleaching event that occurred in the Kimberley. She returned this year to conduct additional surveys to identify how these intertidal reefs have recovered since the 2016 event. From a glance, the reef seems to have recovered very well in just three years. We look forward to seeing her results.



Dr. Verena Schoepf conducting coral surveys at shell island assisted by Michael and KMRS intern Josh. Photo by: Ashley Bachert



Intern Josh putting new coral recruitment tiles onto the frame in the intertidal zone. Photo by: Ashley Bachert

In addition to Dr. Schoepf's project we have been continuing to monitor our intertidal coral transects very closely. There is no bleaching to report thus far. Within the last few months we have also retrieved tiles from our coral recruitment frames. These tiles were deployed three months ago, during a non-spawning window to have a continuous baseline set of data. Upon analysis we were intrigued to see *Pocilloporidae* still recruiting. A new set of tiles has been deployed to capture recruitment of the mass coral spawning brought on by the king tides which occurred late October. We hope to see high numbers of recruits!

Spat Update

The spat we received and deployed onto lines back in April are now ready for de-stock! Spat will be removed from rope panels and moved into their own individual pockets. The spat will remain out on long lines to grow for approximately one more year until they are brought in for first operations to start producing pearls!



Cygnet Bay cleaning boat hooked up to long lines. Photo by: Andrew Beer

AROUND THE FARM

Harvest Party 2019!

September marks the annual Shinju Matsuri (Japanese for “Festival of the Pearl”) which is a week long celebration in Broome. Here at the farm we welcomed the surrounding communities as well as tourists to enjoy a weekend full of live demonstrations followed by good food and live entertainment. We celebrate all of the hard work our pearling team has put into producing this years pearl harvest, displaying it all in the gallery for everyone to enjoy!



2019 Harvest Party! Photo by: Laurelle Jones

End of the season

As we are approaching the end of tourist season and things start to quiet down around the farm, some of our staff depart as well. We wish everyone the best during the wet season and look forward to seeing them all back next year!

FOLLOW US...

For more updates, photos and details on available positions follow us on our social media platforms. We love to share knowledge!



Kimberley Marine Research Station



@kimberleymarineresearchstation



@KMRS2009

Check out our website for more info.. <https://www.kmrs.com.au/>

Contact us via.. Phone:+61 8 9192 4999



Some of the pearls from this years harvest. Photo by: Laurelle Jones

Lights, Camera, Action!

Tourism WA

Tourism WA joined us here at Cygnet Bay back in June as apart of their Ardi cultural drive segment. While here, they documented the James Brown and Terry Hunter story, capturing their special bond while growing up together here at Cygnet Bay. Their story has recently been released, follow the link below to check it out!

<https://youtu.be/82mKwtyXpNg>

Better Homes and Gardens

Better Homes and Gardens took a journey through the Kimberley and stopped by to check out Cygnet Bay. Follow the link below to see inside Australia oldest pearl farm.

<https://www.bhg.com.au/inside-australia-s-oldest-pearl-farm-with-jo-griggs>



Terry Hunter and James Brown enjoying a trip to waterfall reef. Photo taken from Western Australia youtube clip <https://youtu.be/82mKwtyXpNg>.