



# KIMBERLEY MARINE

RESEARCH STATION • CYGNET BAY

**JANUARY - FEBRUARY 2020**



The view from the lookout point at high tide.

Photo credit: Aran

## IN THIS EDITION...

Things start to pick up at Cygnet Bay with the start of the pearling and tourism seasons. An exciting new research project starts, while wet season weather looms.

## STAFF NEWS

### ***Hello to our new interns!***

Laura started her internship with KMRS in late January, as a recent graduate from a Master of Biological Science in Marine Biology at the University of Western Australia (UWA). Originally from Colombia, Laura is excited to work in the wide variety of marine environments Australia has to offer. Aran joined Laura in mid February, to collect data for an ongoing thesis project, as a part of his Masters of Biological Science in Marine Biology at UWA. He welcomes the change in environment, work, and lifestyle from Perth that the unique Kimberly region provides.

### ***Welcome Matilda, Farewell to Anna***

Matilda joined the pearling crew in mid February, and has made a great addition to the team. She looks forward to working with Cygnet Bay over the coming months before returning to Perth to continue her studies in Marine Science. Unfortunately we said goodbye to Anna, who has been part of the pearling crew since the end of last year. She is keen to continue her travels around Australia and the world.



Aran, Laura (our new KMRS interns), Matilda, and Anna (pearl boat deckhands). Photo credit: Matt "Nailgun"

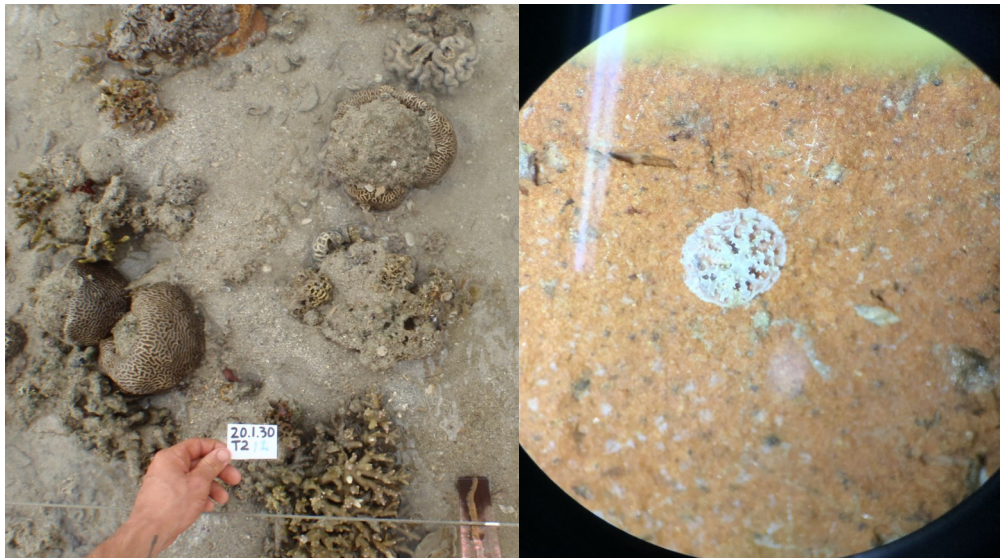


# NEWS FROM THE RESEARCH STATION

## ***Coral monitoring***

Over the last two months, coral sampling was done as a part of our monthly coral monitoring projects at KMRS. The coral frame project looks at the ongoing establishment of new coral recruits in Cygnet Bay, while the coral transect project looks at health and recovery of existing corals within the intertidal zone (exposed at low tide).

These projects come off the back of the *El Niño* event in 2016, the severity of which prompted wider scientific interest in the resilience of our coral communities. Ongoing collaboration between KMRS, the Australian Institute of Marine Science (AIMS), and UWA aims to create a continuous data set to help gain further understanding into how climate change affects corals in North Western Australia.



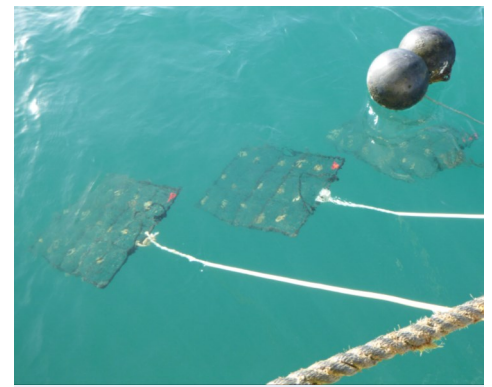
A coral transect, at low tide (left), and a new coral recruit from the coral from project back in the KMRS lab (right). Photo credit: Laura

## ***Rock Oyster Recruitment***

At the start of February we restarted our monthly rock oyster recruitment sampling. This project looks at spat recruitment and survival of *Saccostrea* spp. (Rock Oysters). At the start of February we collected and deployed more tiles. Back at the research station we analyse the tiles and add to our growing dataset, which aims to provide baseline data for marine researchers.

## ***Monthly Sampling***

This project is a part of a collaborative effort with the Cygnet Bay Pearl Farm to collect water and oyster samples to assess oyster health and size. It is also used to pick up changes in water quality before they have a chance to affect the shell.



## ***New biofouling project***

Between mid February and mid June, Aran will be working closely with Cygnet Bay Pearl Farm in a new project looking at the effect of biofouling on live pearl oyster growth. Groups of specially selected oyster will be cleaned at different frequencies to investigate both the impact cleaning regime has on biofouling present, and on overall growth rates of the oysters themselves. Continuous environmental data including temperature, salinity, water turbidity, and chlorophyll availability are also being collected to better understand how biofouling and growth rates change with shifting seasons.

Photo credits: Aran







Sunset at Shell Island, on the Eastern edge of Cygnet Bay.

Photo credit: Laura



Bala, Matilda, and Bella chipping heavy biofouling from pearl oyster panels.

Photo credit: Anna

## AROUND THE FARM

### *Start of the season*

As we pass the halfway point of the wet season, we are starting to see farm operations get back to normal. A big part of early season operations has been destocking last year's spat units, which were the product of a successful spawning and rearing in the Cygnet Bay hatchery. Our pearl boat crews are working hard to maintain the health and quality of our existing pearl oyster stocks. This involves pulling main lines out of the water and cleaning individual panels and shell.

As mentioned, a large part of pearl farm operations year round is the ongoing maintenance of submerged pearl oyster panels, both suspended within the water column, and on the ocean floor. To avoid having to pull lines out of the water, specialised dive boats with hookah set ups allow our highly trained divers to check up on oyster stocks while they are still under water. This is works to both save valuable pearl crew time, and to reduce stress incurred by our oyster stocks.

### *Preparing for Spawning*

The first spawn of the year is currently planned for mid March, coinciding with the full moon. In preparation for the influx of new larvae, the hatchery team has been working hard to grow enough algal feed to support growth throughout the beginning of the life cycle. A few different algal species are prepared to ensure a nutritious and varied diet. Another important part of spawning preparation is picking specific male and female oysters that will increase pearl quality. In late February, our two KMRS interns, along with hatchery staff and pearl boat crew, assessed the gonad colour and size of potential broodstock oysters.

### *New Broome Lease*

Cygnet Bay Peal Farm is currently in the process of setting up a brand new lease, off Gantheaume Point, west of Broome. This exciting opportunity gives Cygnet Bay a wider range of environmental conditions to rear different pearl oyster stocks. It involves the installation of new radar markers, anchor lines and finally the main pearl oyster lines.



A variety of algal feeds grown in the Cygnet Bay hatchery lab.

Photo credit: Laura

# MORE AROUND THE FARM

## *Weather*

Over the last two months the wet season has delivered two tropical cyclones to Cygnet Bay. The effects were mainly felt in increased levels of rainfall. Cyclone Damien brought as much as 121 mm of rain in a single day! Strong winds and swell associated with cyclones caused delays within the pearl farm cleaning schedule, as well as general day to day operations. Road closures between Cygnet Bay and Broome delayed Laura's arrival for two days!



Cape Leveque Road, which runs between Broome and Cygnet Bay, in the wake of a tropical low.  
Photo credit: Laura.



The view from the Cygnet Bay Restaurant dining area at sunset.

Photo credit: Laura

## *Open for Tourism*

The end of February saw the start of the tourism season, all be it a slow one. The restaurant opened for business, with Kate and Robin serving dinner every Wednesday and Saturday. Tourists have started to trickle in, as well as workers from the local communities.

Accommodation has opened, offering a range of safari tents and historic cottages built for the original pearl farmers.

The staff look forward to the influx of tourists usually seen in March, which will mark the start of wider operations, including different marine tours around the region.

## 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 Email: [research@cygnetbaypearls.com.au](mailto:research@cygnetbaypearls.com.au)



The Cygnet Bay swimming pool, with the hatchery and Kimberly Marine Research Station in the background.

Photo credit: Laura