



# KIMBERLEY MARINE

RESEARCH STATION • CYGNET BAY

**MAY – JUNE 2018**



Photo C. Davies

## News from the Research Station

### Spat Delivery & Update

The highly anticipated spat delivery took place at the beginning of May, with over 250,000 oysters arriving on slats and ropes settling into their new homes in the hatchery. By the end of May, the spat had grown large enough for the rope panels on which they had attached to be transported out into the farm. Getting the panels secure in baskets and mesh bags



was a big operation that required the help of all the hatchery staff! A few rope panels and slats that weren't deployed were instead re-homed into two aquaria.

The interns are monitoring and feeding daily. The spat are looking healthy and are growing well in the nutrient rich King Sound.



Pearling Manager Gary and Intern Danielle deploying spat into hatchery tanks. The spat aquarium (left photo).

## Other research from the interns

### Coral Frames Project

The coral frames from the new project set up by the interns to monitor coral polyp recruitment within Cygnet Bay were collected for the first round of analysis this month. There were two subtidal and two intertidal frames that had been deployed in the bay for two months during the first peak spawning period, and each contained nine tiles for analysis. A range of coral polyps were found on the tiles and identified as either underdeveloped, Pocilloporidae, Acroporidae, Poritidae, or 'other' for any polyps not classified as one of the three identifiable taxa. The frames will next be deployed into the ocean in September and remain there for two months to record coral recruitment for the peak October spawning event.



A Pocilloporidae coral polyp recruit.

### Sediment Composition Project

A new project looking at the biotic and abiotic composition of beach sediment within Cygnet Bay is also in the planning phase. This project aims to investigate whether there is a change in composition with season or a difference between samples taken from separate sections of the intertidal zone. Creating baseline data sets that can be used for future reference and by visiting scientists is a main aim of KMRS and thus this research project will be a great addition to those already being conducted by the interns.

### New Direction - Edible Rock Oyster Ecology Project



With the previous KMRS rock oyster project concluding in April, a new rock oyster project is in the process of being set up to add to the long term data recorded here in Cygnet Bay. This project aims to look further into the ecology of the edible rock oyster, *Saccostrea spp.*, by investigating the survival of spat settled on fibro-concrete tiles over a three month period. This project will also be conducted in new areas, with tiles being placed at Diver's Creek and in front of the Master Pearler's accommodation.

## Around the Farm

### Harvest!

Early June marked the start of harvest season this year, with our second technician Mike arriving to join Garata in the hatchery as they begin the lengthy process of harvesting pearls, seeding and re-seeding oysters. This is an exciting time of the year, as the results of work from two years ago are revealed. Increasing the levels of anticipation and making Pearling Manager Gary jump for joy, this year the first batch of hatchery bred spat from 2014, which were seeded in 2016 will be harvested. This marks the culmination of the first full cycle of pearl production for Cygnet Bay.

## Biosecurity

In May we had a visit from Helen Jenkins who is the Aquatic Biosecurity Liaison Officer for Animal Health Australia. Her work focusses on aquatic biosecurity and in particular the Northern Australian strategy. She was here to consider how KMRS could become involved as a Biosecurity Ambassador. In line with the projects her team are investigating, there is potential for a bio-fouling community analysis to be conducted at KMRS to add to the valuable data recorded in the remote Kimberley region. A sampling kit was left with the research team and some initial samples will be collected in the near future.

## Terry's Cultural Tours

Since the start of this year's dry season, visitors to Cygnet Bay Pearl Farm have had the opportunity to take part in one of Terry Hunter's cultural tours. Belonging to the local Bardi-Jawi people, Terry shares his in-depth knowledge of the land and sea he grew up in and knows best. His Coast to Creek tour takes tourists from base camp down to Diver's creek, where they can have a drink of fresh water that bubbles to the surface amongst the rock pools, taste fresh rock oysters straight off the beach, and listen to him name all the different vegetation growing in the area. The second Rigi tour explores the importance of the mother of pearl shell to the coastal indigenous peoples and how it has been used throughout the generations.



The inner nacre surface of recently harvested *Pinctada maxima* shells, also known as Mother of Pearl. An important resource to the Bardi-Jawi and the Cygnet Bay Pearl Farm.

## Staff News

### Andy Returns

Master's student Andy Bossie, from the University of Western Australia, is returning to KMRS in June to conclude his rock oyster project, which studied spatfall of *Saccostrea spp.* on settlement tiles of different materials. The study showed that during peak recruitment in the wet season, oyster spat densities were highest on materials with significant concentrations of calcium. Unfortunately, following the massive rainfall months of January and February 2017, oyster larvae is likely to have been flushed out of the King Sound. This resulted in relatively low settlement later in the wet season. The results of the study have been used to kick start a new project direction, as mentioned above in *Other research from the interns*, which will expand the baseline data being collected on these species.

## Photo of the Month



A false killer whale, *Pseudorca crassidens*, breaching in Cygnet Bay during May.  
*Photo credit: Mat Payne*

## Follow Us



+ 61 8 9192 4999



research@cygnetbaypearls.com.au



www.kmrs.com.au



Kimberley Marine Research Station



@KMRS2009



@kimberleymarineresearchstation



**KIMBERLEY MARINE**  
RESEARCH STATION • CYGNET BAY



**CYGNET BAY**  
.....  
PEARL FARM