



# KIMBERLEY MARINE

RESEARCH STATION • CYGNET BAY

MAY  
2014



Sharon

Re-considering that surf today! (Broome, Feb 2014)

## Arrival of the new KMRS manager



KMRS manager Dr Erin McGinty

One year ago I moved to Cygnet Bay and commenced work as the Research Manager of KMRS. With a background in pearl oyster genetics as well as environmental management, my role was quickly spilt into managing KMRS as well as managing the research for Cygnet Bay pearl farm.

Whilst in this role, I hope to see the Kimberley Marine Research Station improve its already excellent reputation as an accessible and affordable marine research hub where researchers can rely on successfully completing their field work each visit. By providing superior research facilities, equipment that can be relied upon and staff with extensive knowledge of the local marine environment, I hope to see KMRS

become the preferred venue for marine research by scientists worldwide. Vessel maintenance, infrastructure development and standard operating and safety procedures will continue to be at the highest of my priorities so that research can proceed safely and efficiently.

One of the most important goals of the KMRS is to develop a strong working relationship with the native custodians of the land, in particularly the Bardi-Jawi Rangers. Since I arrived I have continued to be impressed by the knowledge the Bardi-Jawi have of the Kimberley marine environment and I personally have learnt a lot from them. They have worked closely with a few research groups since I have been here and have significant benefitted the scientists field work. I hope all that visit KMRS leave with an understanding of the importance and relevance of marine science to the local community.

Overall, I hope to see the Kimberley Marine Research Station make a major contribution to all disciplines of marine research by operating as a dynamic research centre and to play a part in not only enthusing the Australian public about science but furthering our knowledge so that more informed management decisions can be made on our marine environment.

The biggest highlights of the past year for me have been:

- Meeting such a wide variety of researchers from many different disciplines and sharing in their wealth of knowledge in their field.
- Seeing KMRS grow in the amount of research scientists visiting the station and the amount of information being collected on the Kimberley marine environment.
- Skippering researchers on extended voyages through the Kimberley.

## What's been happening at KMRS

### MUCRU Kimberley dolphin research project continues at KMRS:



Murdoch Uni's Cetacean Research Unit PhD candidate Alex Brown returned to KMRS for his 4th and final, month-long field trip. Alex's project, entitled "Snubfin & Humpback Dolphins in the Kimberley", commenced in 2012 addressing how dolphins might be influenced by pressure from coastal development across the Kimberley and gathering data on their abundance, distribution and genetic connectivity.

Alex was joined on this trip by MUCRU acoustic specialist Josh Smith. Josh is

seeking to characterise the sounds, or vocalisations, produced by snubfin and humpback dolphins. Understanding how they use sounds is essential in assessing the influence of human-derived noise in the marine environment such as shipping, construction, and geophysical survey.



Alex and Josh took to the water in two vessels –Murdoch's Blue Steel and our KMRS vessel, the Southwind, enabling them to complete their identification surveys, while the Southwind targeted larger groups of animals with mobile hydrophones.

Follow the team's online blog <http://mucru.org/blogs/> or check out:

<http://au.news.yahoo.com/thewest/a/-/wa/17923132/researchers-track-dangers-to-rare-dolphins/>

<http://www.sciencewa.net.au/topics/fisheries-a-water/item/2253-west-kimberley-coast-haven-for-inshore-dolphins.html>

Photographs by Alex Brown.



### Successful completion of the first research teams to set sail on the 5yr Kimberley Marine Science Project:

WA Marine Science Institution (WAMSI) and the Western Australian Government have partnered to ensure the natural and cultural values of the Kimberley are protected as the region gains interest for its economic potential. The Kimberley Marine Research Program (KMRP) will undertake marine research over the next 5 years to support management of the proposed State marine parks at Camden Sound, North Kimberley, Roebuck Bay and Eighty Mile Beach and the coastal waters outside of these parks. As an associate member of WAMSI, KMRS will play a significant role in the completion of this 5 yr program by hosting the majority of these research teams.



The Kimberley Marine Science Program kicked off on the 1st of October 2013 with research groups setting sail along the Kimberley coastline and successfully completing their projects whilst being based at the Kimberley Marine Research Station (KMRS). Marine scientists from all over Australia carried out their studies around Cygnet Bay and up to 120 nm along the Kimberley coastline. To accomplish the extended research trips abroad, KMRS put together an affordable and safe dual vessel option to offer a work platform whilst providing luxury accommodation affordable to researchers. Places visited include Montgomery Reef, Yampi Sound, Talbot Bay, Adele Island, and the unforgiving entrance of the Walcott Inlet. The successful completion of these projects was no mean feat in a place previously restricted to marine scientists by accessibility and cost. Common belief that marine research could only be carried out along the Kimberley coastline on board a large and costly vessel ex a major port has been dismissed.



One of the main highlights of the initial research projects to embark on the Kimberley Marine Science Program was to see the collaborative work between the native custodians of the land and marine scientists from all over Australia.

### Curtin University



The first group off the rank was Curtin University lead by Professor Lindsay Collins looking at reef growth and maintenance. This team used a dual vessel option for accommodation (the 'Escapade') and a work platform (Atalanta IV) for their extended trip through the Kimberley. Navigating over many intertidal reefs from Sunday Island to Yampi Sound, Mongomary reef, Turtle Reef and Adele Island, seismic surveys were successfully completed presenting an interesting growth history during the Holocene. It was an absolute pleasure skippering for this group as they displayed all the characteristics of an effective, cohesive and professional work team. Looking forward to their next visit.



### UWA

Lead by Professor Ryan Lowe, UWA explored the intertidal flats of Tallon reef to examine the benthic community production and response to environmental forcing. This team found some interesting results in terms of seagrass growth rates. It should be mentioned this team worked very well with the Bardi Jawi on their project and formed a close working relationship with many of the rangers.



## CSIRO/UWA

Andy Revill (CSIRO) along with UWA students set sail to the Walcott Inlet for 10 days to investigate the role of rivers and estuaries in sustaining marine productivity in the Kimberley. Using the 'Escapade' for accommodation



(luxury accommodation at that) and the Dorado as the work platform, this team successfully collected sediment and water quality samples with the aid of a hi-ab on-board the Dorado. Unfortunately, the Dorado didn't perform at its best during this trip, however, to the credit of the skipper we were able to overcome any mechanical issues faced and successfully completed this project within the planned timeframe. The Dorado has since undergone a mechanical and structural refit, been extended by 1 m and fitted with a new hydraulic hi-ab.



## CSIRO/UWA/ECU

Lead by Gary Kendrick (UWA), Douglas Bearham (CSIRO) and Mat Vanderklift (CSIRO) this group of up to 7 researchers explored the production and herbivory of seagrasses, microalgae and macroalgae on the intertidal reef flats in an effort to further understanding of benthic primary productivity. On board the 'Southwind' this team commuted to Sunday Island and Tallon Reef daily working side by side with the Bardi Jawi Rangers. The transfer of knowledge of the local marine environment from the Rangers and the research methods/instruments used to study this environment by the scientists was rewarding to see. This group is always highly organised when they visit the station which contributes to the smooth running and successful completion of their field work.



## Media



In late 2013 Silver Back Productions visited KMRS to film a species of octopus in aquaria for a new series due out in 2014. The particular species is currently unnamed as it was only relatively recently discovered by cephalopod scientist Dr. Julian Finn of the Victoria Museum. The series will be similar to that of the well known Blue Planet and Planet Earth. To find out more on the Octopus which led to the interest in filming it for this series check out:

<http://museumvictoria.com.au/about/mv-blog/nov-2011/octopus-on-dry-land/>

## KMRS new laboratory facility



Gary Firman busily working away in the algal laboratory.

We are excited to announce our new marine research laboratory opened its doors to KMRS visiting scientists in April this year. Currently we have available bench space, a fridge/freezer, a sink, filtered seawater/freshwater and temperature control within the laboratory. Three researchers have already utilised the laboratory facilities including Verena Schoepf (UWA), James McLaughlin (CSIRO) and Christin Sawstrom (ECU). The KMRS laboratory facility adjoins to the pearl farm hatchery which contains an algal laboratory and pearl oyster grow out area.

## Photo of the year



## Photo of the year

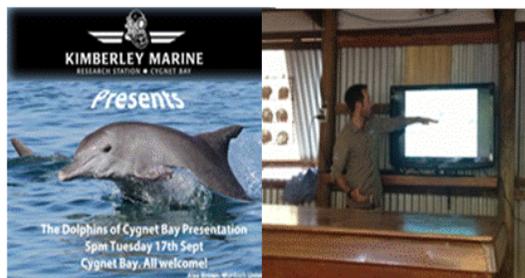
There has been so many but here is one that received a lot of attention on social media.

**August 2013**

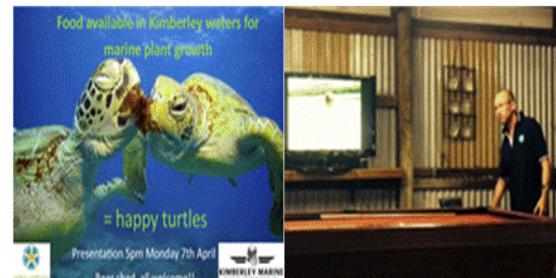
A fever of cow-nosed rays (*Orcaella heinsohni*) at Cygnet Bay

By Erin McGinty, KMRS manager

Visiting scientists presenting their research at KMRS



Alex Brown, Murdoch University



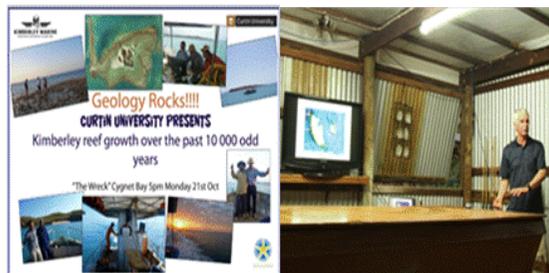
Mat Vanderlift, CSIRO



Renee Gruber, UWA



Verena Schoepf, UWA



Professor Lindsay Collins, Curtin University



**KIMBERLEY MARINE**  
RESEARCH STATION • CYGNET BAY

+ 61 8 9192 4999 ✉research@cygnetbaypearls.com.au

[www.kmrs.com.au](http://www.kmrs.com.au)