



Adriana Humanes

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### AIMS@JCU Science Communication Reports

Earlier this year, AIMS@JCU awarded student members with a total of \$15,750 in science communication funding. This was an extremely competitive round of applications and the awards were in the form of \$1,500 towards international travel and \$750 towards domestic travel.

Congratulations to successful applicants: Catalina Aguilar, Kathryn Berry, Leanne Currey, Mario Espinoza, Ian McLeod, Amin Mohamed, Chiara Pisapia, Joe Pollock, Justin Rizzari, Jeroen van de Water, Muhammad Wahab and James White.

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Photographs in this publication were submitted by AIMS@JCU members unless otherwise stated



Some of these students have now completed their travel and have provided us with reports which are included on the following pages.

### About the AIMS@JCU Newsletter:

This newsletter is produced quarterly and distributed by email to AIMS@JCU members, AIMS and JCU staff.

If you'd like to be added to our mailing list, or have a query regarding this newsletter, please contact:

**Editor: Lauren Gregory**  
Phone: (07) 4781 4074  
Email: [aims@jcu.edu.au](mailto:aims@jcu.edu.au)

## Science Communication Reports

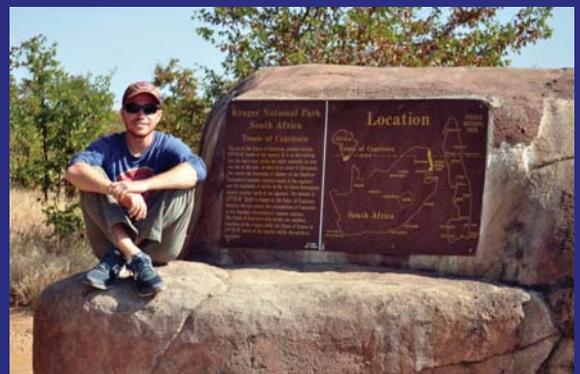
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Mario Espinoza, \$1,500 - Sharks International, Durban

This year I had the opportunity to present some of the results from my PhD research at the Sharks International conference in Durban, South Africa. This was the second Sharks International meeting, which is every four years. During this meeting, shark researchers from all over the world gather to share their research. So this was a great opportunity to show others the important work that we are doing with sharks in the Great Barrier Reef (GBR) of Australia. My research project is looking at how different species of sharks use coral reef ecosystems, what the role of these species is in the ecosystem, and the extent to which marine reserves protect shark populations within the GBR Marine Park. Over the past few decades, reef-associated sharks have experienced large declines in abundance worldwide due to overfishing and habitat loss.



So the results from my work have important implications for the management and conservation of reef-associated sharks. During the meeting I was also able to network with other scientists and establish future collaborations. Without the support from AIMS@JCU I would not have been able to afford the travel cost for attending this conference.



Justin Rizzari, \$1,500 - Sharks International, Durban

I attended the 2nd Sharks International Conference in Durban, South Africa at the beginning of June 2014. Held once every four years, the conference provides a forum for the world's leading

## Science Communication Reports

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shark and ray scientists, along with students and early career researchers to meet, share ideas, update information and report on the progress of the most recent scientific studies. I was able to travel to the conference with the support of an AIMS@JCU student travel award and presented research from my PhD entitled “Apex Predators on Coral Reefs: Do Marine Parks Need Sharks?” in the Trophic Ecology session.

My talk described the results of numerous projects from my PhD that have aimed to examine the trophic role and importance of sharks on coral reefs and to what degree fishing disrupts these trophic interactions. I accomplished this through use of diet analyses, stable isotope measurements, manipulative experiments and population assessments of sharks in fished, un-fished and no-entry zones of the Great Barrier Reef Marine Park. I demonstrated that sharks on coral reefs occupy high trophic positions, and that there may be instances of functional redundancy with other predators. Furthermore, my results also suggests that sharks may have a profound indirect influence on other ecosystem components and that the protection afforded by marine reserves positively influences the abundance of shark populations on coral reefs. Overall, these results suggest that sharks have important ecological functions on coral reefs and should therefore be managed using the precautionary principle.

During the conference I gained a greater appreciation for elasmobranch research, and I particularly enjoyed learning about elasmobranchs in other systems outside of coral reefs. Attending Sharks International in Durban solidified my desire to pursue a career as an elasmobranch research scientist. I met a wonderful group of people at the conference and the connections I made have already proved to be fruitful as I have now embarked on some collaborative projects as well as set up potential future post-doc opportunities. Without the support of an AIMS@JCU travel award I would have not been able to attend this conference.

With that, I want to express my sincerest gratitude to AIMS@JCU for providing funding support to students to attend conferences and present their work on an international scale.

**Chiara Pisapia, \$1,500 - Fieldwork in Lhaviyani atoll in the Maldives**

In April 2014 I was able to extend my fieldwork internationally with the support of an AIMS@JCU student travel. For the final chapter of my PhD, I surveyed coral background partial mortality

Ian McLeod

## Science Communication Reports

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in Lhaviyani atoll in the Maldives, Indian Ocean, for a large-scale comparison with mortality rates on the Great Barrier Reef.

I am very grateful for the AIMS@JCU student travel award. During my time in Maldives not only I collected data for my final thesis chapter, which is under review at the moment, but I also had the possibility to teach a field base course in coral reef ecology assisting Dr Micheal Sweet.

Biotic and abiotic agents of partial mortality can vary in frequency, intensity and spatial scale and can therefore have different impacts on coral colonies at different geographic locations and scales. Observations in different geographic locations provide an insight into local versus global severity of background rates of injury. Given the increasing concern surrounding the capacity of corals to withstand increasing diversity, frequency and severity of acute disturbances, it is critical to provide information about background rates of injury and repair, which may limit the recovery of coral populations and communities from successive disturbances.

My fieldwork took place in the newly opened research station Korallionlab and I was lucky to survey three different reefs within the atoll. However, the research vessel was definitely not up to Australian standard!



Ian McLeod, \$1,500 - 7th World Recreational Fishing Conference in Campinas, Brazil

I was very grateful to receive an AIMS@JCU Travel Funding Award earlier in 2014. I combined this with a Fisheries Society of the British Isles Travel Grant and an AIMS@JCU Photography Prize to pay for flights and registration to attend the 7th World Recreational Fishing Conference in Campinas, Brazil.

This conference only occurs once every three years and this was the first time it was held in a developing country. The theme of

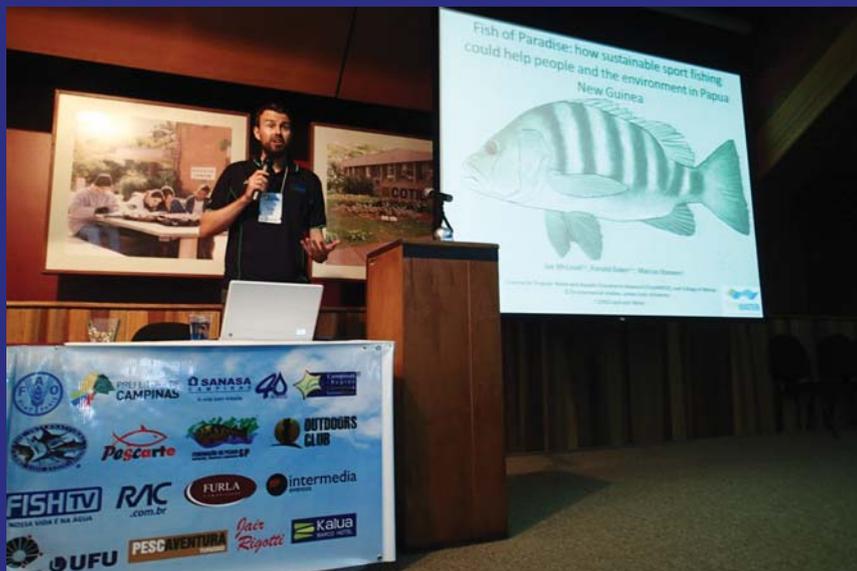
Leanne Currey

## Science Communication Reports

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the conference was change, transformation and adaptation in recreational fisheries. My current research focuses in sustainable sport fishing with a particular focus on Niugini Black Bass (*Lutjanus goldiei*) the key target of Papua New Guinean (PNG) sport fisheries and one of the world's premier sport fish. Attending this conference was a great opportunity to learn about the latest research from the world's leading researchers in my new research area.

I presented a paper 'Fish of Paradise: how sustainable sport fishing could help people and the environment in Papua New Guinea' which discussed preliminary results describing the movement ecology, critical habitats for adults and juveniles, and feeding preferences of Niugini black bass. In addition, I showed a recently completed professional video, which I co-produced with Jon Rawlinson from the University of British Columbia, showing the 'fish of paradise' underwater and on the line, and highlighted the potential of this project for PNG's sustainable future. I presented on the last day of the conference and was pleasantly surprised to see a packed house. The research video was shown at the conference registration and was promoted on the front page of the conference website. Conference attendance was very worthwhile as I got a lot of advice from some of the



world's best researchers and set up what I hope will be long-term collaborations with researchers from around the world.

For more information about our project please check out our website [www.niuginiblackbassresearch.com](http://www.niuginiblackbassresearch.com) and watch the video 'Fish of Paradise' <https://www.youtube.com/watch?v=5dieDojg5C> A&list=PLDcAVIX\_YMznWOTUL1sk33oURvpzMGYcY

Leanne Currey

# 2014 AIMS@JCU Student Seminar Day

## Summary

Many thanks to everyone who contributed to get another successful AIMS@JCU seminar day, which this year was held at the Pier restaurant in Townsville on 8th of August 2014. Special thanks to all presenters and their supervisors and supporters, all attendees, our judges (Dr Liz Tynan and Dr Chris Crossland for oral presentations; Prof Helene Marsh and Dr Lyndon Llewellyn for posters; and Marc Gregory for photos). Marc Gregory of Visual Echo Photography took some great photos of the occasion which can be viewed at [www.VisualEchoPhotography.com.au](http://www.VisualEchoPhotography.com.au)

Congratulations to the following prize winners:

- 1st place seminar presentation (\$1,500): **Justin Rizzari** - The impact of conservation areas on trophic interactions between apex predators and herbivores on coral reefs
- 2nd place seminar presentation (\$1,200): **Pasang Tenzing** - The eco-physiology of two species of tropical stingray in an era of climate change.
- People's choice seminar presentation (\$600): **Kathryn Berry** - Coal carrier spill: acute and chronic effects of coal dust on a reef-building coral, seagrass and fish species.
- 1st place speed talk (\$1,000): **Martino Malerba** - If you cannot explain great things, explain small things in great ways.
- 2nd place speed talk (\$800): **Patrick Buerger** - Characterising bacteriophages for black band disease: potential for phage therapy?
- 1st place poster presentation (\$800): **Brian Strehlow** - Identifying, characterizing and quantifying the effects of simulated dredging on sponges.
- 2nd place poster presentation (\$600): **Danilo Malara** - Porphyrins as self-destructive photocatalist in seawater.

Photographs: (\$100 each):



Research in action  
Adriana Humanes - 'Replication'



Photo micrograph / macro  
Adriana Humanes - 'Micro landscape'

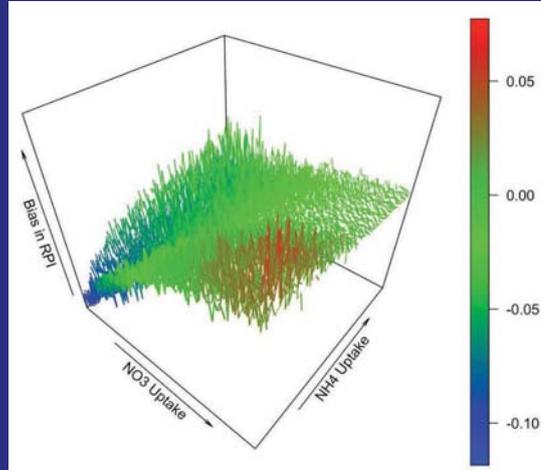
Patrick Buerger

# 2014 AIMS@JCU Student Seminar Day

## Summary



Research subject  
Leanne Currey - 'Demersal disguise'



Quantitative marine science  
Martino Malerba - 'Output from Nitrate-Ammonium-Biomass model'



People's choice  
Kathryn Berry - 'Starting coal spill experiment'

Hearty congratulations to these winners, who each received a prize of funding for further science communication activities.

We hope you enjoyed the 2014 student seminar day, we're already looking forward to next year's. Keep an eye on our website for updates.

For more information, please see: <http://aims.jcu.edu.au/our-research-publications/student-seminar-day.aspx>

Patrick Buerger

## Research Director Report

It was great to catch up with lots of members at recent events, including the seminar day and the all staff morning tea at AIMS, and the increasing number of members using the AIMS@JCU hot desks. Creating opportunities for communication and networking is a big part of what we try to achieve, and I hope that events and facilities such as these are allowing you all to establish and strengthen connections that will serve you well into the future.

We were very pleased with The Pier restaurant as a venue for seminar day, and also with the new mix of communication formats including speed talks and a keynote presentation from a member of our Alumni. I also enjoyed the showcasing of the significant infrastructure of both AIMS and JCU being so efficiently utilised collaboratively through AIMS@JCU projects, for example the Seasim, ships, and the acoustic listening arrays. Finding these sorts of strengths in our synergies is also a core focus of AIMS@JCU. We have identified several improvements for next year, including darkening the area around the screen, and providing formal feedback from the judges to presenters. We would also welcome any suggestions our members might have for future seminar day events.

Congratulations to AIMS@JCU alumni, Dr Jean Baptiste Raina, who recently received the very prestigious Tom Brock Award for the best presentation at the International Symposium for Microbial Ecology, for his presentation of his AIMS@JCU research on DMSP cycling in the coral holobiont. He will now be invited to join the ISME junior advisory board in honour of his achievements. Well done JB!

It will soon be that time of year again, when we recruit the next cohort of AIMS@JCU scholarship recipients. Good luck to all applicants, both international students who have already submitted, and domestic applicants who are finalising their submissions for the October deadline.

Libby Evans-Illidge, AIMS@JCU Research Director

Contact: [e.evansillidge@aims.gov.au](mailto:e.evansillidge@aims.gov.au)

Adriana Humanes