AIMS@JCU NEWSLETTER

Crystle Wee

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20 Years of AIMS@JCU!

AIMS@JCU Seminar Day

AIMS@JCU is 20 years old! We celebrated this significant milestone with an extra special AIMS@JCU seminar day. The two day event brought together current and alumni members at all levels to reflect on their journey through Marine science and show case the incredi-ble work our members are busy achieving. Thank you so much to everyone involved. It was a truly fantastic event.

As always, the quality of the seminars, 3MT speed talks, poster presentations and photo-graphs were exceptional and truly representative of the diverse range of student research being conducted at AIMS and JCU.

The Seminar Day winners were:

Seminar talk - first prize ($1,500)	Tiny Remmers
Seminar talk - runner up prize ($1,200)	Raf Rashid
Seminar talk - people's choice ($600)	Sina Ehlert
3MT speed talk - first prize ($1,000)	Peter Lowley
3MT speed talk - runner up ($800)	Alex Macadam
Poster - first prize ($800)	Ingo Miller
Poster - runner up ($600)	Nicolas Mafla Viscarra
Photography ($100 each)	
Quantitative Marine Science	Ingo Miller
Research Subject	Ingo Miller
Research in Action	Ingo Miller
Photomicrograph/Macro	Greta Zampa
People's Choice	Greta Zampa

The quality of the seminars, 3MT speed talks, poster presentations and photographs were exceptional and truly representative of the diverse range of student research being conducted at AIMS and JCU.

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

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About the AIMS@JCU Newsletter:

This newsletter is produced regularly 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

Email: aims@jcu.edu.au

Website: www.aims.jcu.edu.au

Greta Zampa

20 Years of AIMS@JCU!

AIMS@JCU Seminar Day

The day began with an invigorating Welcome to Country from Auntie Dorothy Savage, followed by welcomes from AIMS@JCU Executive Committee members: Prof. Ron White (JCU), and Dr. Kameron Christopher (AIMS).

Audiences were treated to exhilarating stories and insights from across the ocean:

- giants leave hidden trails, from whale sharks carving seasonal paths across the Coral Sea to pygmy blue whales navigating offshore basins,
- tiny life speaks volumes, with microbes, viruses, and eDNA exposing reef health, elusive predators, and even coral recovery potential,
- reefs balance on thresholds, where macroalgae removal, coral "matchmaking," and larval seeding tip ecosystems toward survival or decline,
- innovations unlock the unseen, from machine learning that automates benthic surveys to hyperspectral imaging of algae and portable reef restoration tech, and
- even threats tell stories, as fire urchin venoms, microplastics, and climate extremes reveal both risks and pathways to resilience.

AIMS@JCU is currently funding five incredible post-docs, Four of these: Dr. Gemma Galbraith, Dr. Magena Marzonie, Dr. Tomas Leon Cortes, and Dr. Alzayat Saleh, participated in a panel, facilitated by Dr. Line Bay to share valuable lessons from their academic experience. Gemma expanded on her work with the AIMS@JCU Postdoctoral Fellow presentation on using remote technologies to explore deep coral reefs and their ecology.

The day provided an opportunity for our staff and alumni members to get involved. We'd like to specifically thank the session chairs for keeping the day on track: Dr. Josephine Nielsen (AIMS), and Dr. Vanessa Haller (AIMS); and the judges who provided great insights into what makes science communication effective: Libby Evans-Illidge, Dr. Katharina Fabricius, Dr. Neal Cantin, Patrick Laffy and Dr. Christopher Brunner (AIMS); as well as Prof. Scott Smithers and Dr. Cecilia Villacorta Rath (JCU).

The day ended with an opportunity for current and alumni members to network in a relaxed environment with a function and award presentation joint funded with JCU Advancement.

Alumni and current members showcased the accomplishments of AIMS@JCU through a video prepared by JCU's Trusts and Foundations Relationship Officer, Penelope Falkenhagen. Keep an eye on social media for more great stories.

The second day of our AIMS@JCU 20-year celebration was a cultural engagement day, held at the Australian Institute of Marine Science on Friday 26 September.

The day began with a powerful smoking ceremony, cultural storytelling, and displays of traditional tools and artwork facilitated by Uncle Eddie Smallwood and Gudjuda rangers.

Special thanks to Courtney Burns, who spoke on incorporating diverse knowledge for elasmobranch conservation with Traditional Owner collaborations, and to Redbird Ferguson, who presented on decoding tropical seasonality using Indigenous calendars and environmental data.

Thank you also to Dr. Allison Paley & Tullia Grego who talked about the ATSIMS program, its origins with AIMS@JCU and continuing work creating the pipeline into science for indigenous young people and to Distinguished Professor Stewart Lockie, who was able to present despite Qantas disruptions.

Images courtesy of AIMS

Lastly, a huge thank you to Libby Evans-Illidge and the Indigenous Partnership team who put a lot of time and effort into helping organise the day and delivering exceptional presentations. Their passion was evident, and it was a privilege to hear their stories. Ending the day with the 'You can't ask that' panel was beneficial to everyone present and was so successful that it will be repeated at AIMS again… watch this space!

We hope you all took advantage of the day to build your network and learn a bit more about the amazing research being done. If you have any feedback on the day, please feel free to email through your suggestions; we are always looking at ways we can improve the seminar day experience.

Crystle Wee

Greta Zampa

AIMS@JCU Indigenous Undergraduate Scholarship report - Nyoka Hrabinsky

My name is Nyoka Hrabinsky. I am currently studying a Bachelor of Environmental Science and Management in my first year at Nguma-bada Campus, JCU Smithfield. I am grateful to be the recipient of the AIMS@JCU Indigenous Undergraduate Scholarship.

This year Anthropology was my favourite because I find people, culture, and social structures fascinating. I enjoyed learning how humans connect to the world and how our societies, beliefs, and values shape us. This subject helped me understand human behaviour, emotional growth, and why we are the way we are.

There were many learning highlights throughout the year. I was surprised to learn that marble is formed from limestone and I found it eye opening to learn how the environment is measured in monetary value (something that I never ever would have thought about). One assessment that I am most proud of was an ethnography essay about my grandmother and her experiences growing up in the mission dormitories, a topic that felt important to document and was quite close to me. The challenges I faced were staying focused when topics didn't interest me, managing stress, balancing uni, work and life in general. One of the biggest challenges I overcame was confronting a strong fear of cane toads when doing lab work in Introduction to Biodiversity class, which was a huge personal achievement for me.

As of next year I am excited to announce I have been accepted for an Anthropology cadetship with the Cairns Institute. This opportunity will help me gain experience in social science and further my experiences. I hope to take on mentoring or community involvement in the future, especially as a mentor for younger people and those from my amazing community Yarrabah.

The scholarship support has made a huge difference to me this year. The funding helped cover fuel and travel expenses, buying healthy foods, stationaries and my JCU parking permit. This relieved a lot of stress, especially during the periods from when I was driving from Gordonvale to Smithfield every day.

This year has been one of the most challenging years of my life. Studying in trimester mode made the study period intense, but I made it! This year's subjects have certainly contributed towards shaping who I am becoming as a young academic and researcher. Gaining more knowledge has made me more confident. I've also taken a more important step and that's towards my personal growth: beginning to overcome my fear of cane toads (not completely gone yet) and learning how to believe more in myself knowing that I am capable and I can do it.

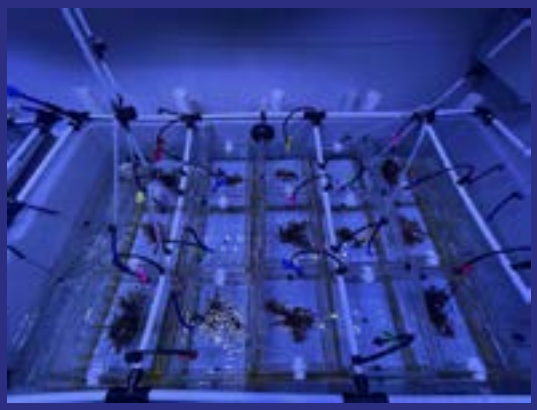
Looking ahead, I am most excited about beginning my cadetship, learning more about anthropology, social science and the environment. In the future my goal is to have a career that combines them all. I would like to extend my deepest gratitude and sincere thank you to everyone who contributed to the scholarship and supported my journey this year. Your belief in me has made a huge difference and I cannot thank you enough for the opportunity and support.

Pilot Research Award report

Ana Carolina Grillo Monteiro

Project title: Competition in early live stages of corals

Tropical coral reefs are among the most speciose and productive systems on Earth, and space to settle and grow on the hard substrate of the reef is often a limiting resource for sessile organisms. Therefore, these organisms constantly compete for space throughout their lives, and the first phases after settling on the substrate are critical for their survival on the reef. In response to global and local anthropogenic stressors, reef builders (e.g., hard corals) once dominant on coral reefs are becoming less and less functionally important, and in some cases replaced by other non-reef builders (e.g., macroalgae). These changes in benthic composition can alter the frequency and intensity of competitive interactions among these major benthic groups. Although much is known about how hard corals compete with other organisms on the reef, less studies have addressed competition at early life stages and how it can impact the development of coral recruits, particularly under ocean warming. This project aimed to address competition between recently settled hard corals and abundant competitors such as macroalgae. I investigated if the presence of macroalgae affects the development and survival of coral recruits under ambient and warming temperature through a laboratory experiment.



Experimental setting with small tanks containing coral recruits and macroalgae.

To evaluate the effects of competition on the coral recruits, detailed photographs of the recruits with a size and color scale were taken before, during, and after the experiment ended (i.e., 5 times in 25 days). These photos will be analyzed to extract information on: changes in color (discoloration or bleaching), growth and development (coral budding and any tissue damage in corals), and coral survival.

The results of this research will help disentangle the effects of the common macroalga *Sargassum* sp. on the development of recently settled coral recruits, under ambient ocean temperature and simulated summer heatwaves. These results will also help direct management strategies related to coral husbandry and coral restoration by understanding the dynamics of competition during the first life stages of hard corals.

Contact: ana.grillomonteiro@my.jcu.edu.au

Crystle Wee

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Professional Development Award report

Seth Keep

Thanks to AIMS@JCU, I recently had the opportunity to attend the BYOGUIDES Coral Identification Workshop delivered by Russell Kelley. This two-day program occurred on November 20 and 21, 2025, at the ATSIP building on the JCU campus, Townsville. Designed as a capacity building program, this workshop constantly evolved and increased in complexity as our comprehension increased. The first day began as an overview of corals themselves, and several key terms were ingrained which would become invaluable across the rest of the workshop (e.g., septa, costa, axial corallites, etc.).

We also took a pre-workshop quiz, to gain a baseline, initial capacity for identification in coral genera. While I enjoy coral and am actively practicing research in this specialty, I was surprised at how many genera I did not know! Following this, we looked at coral skeletons and learned how to utilize the BYOGUIDE Coral Finder. The novelty of this guide is its approachability. Corals of countless genera are structured into key groups defined by morphology, allowing the user to decipher the genera of any coral by following the guide's workflow. We finished the first day looking at more of these key groups (e.g., branching corals, meandering) and had to present in front of the rest of the workshop how we would approach identifying a coral. Although this was slightly intimidating at first, this proved a valuable experience to learn how to effectively explain our process of identification.

Our coral knowledge was built upon on the second day, as more key terms were introduced to enable us to investigate more key groups of corals. We returned to skeletons for a bit, but most of this day was centered around review of high-quality photographs and more practice to build our proficiency in identifying coral genera and explaining our approach. Russel also presented a few lectures showcasing the importance of coral ID and how it is used in the real world. We ended the day by taking a post-workshop quiz, and the results for the group were, unsurprisingly, vastly improved. I personally saw a considerable increase in my proficiency of identification, but most importantly, I am now able to explain how/why I reached that conclusion. I feel confident in approaching coral identification and sharing with anybody, regardless of their pre-existing knowledge, how to also identify corals. This workshop and experience has profoundly enhanced my ability as a marine scientist, and future as a coral researcher, and I am immensely grateful for this opportunity.

Contact: seth4ocean@gmail.com

Professional Development Award report

Crystle Wee and Matilde Drake

We also participated in Russell Kelley (author of the Indo Pacific Coral Finder and associated identification guides)'s Coral Identification Workshop.

The Coral Identification training is centred on the Coral Finder Toolkit and provided a structured introduction to the current state of Indo Pacific coral taxonomy. The Coral Finder Toolkit is a visual, dichotomous field guide that uses clear photographs and simple decision pathways to help users quickly and accurately identify Indo-Pacific coral genera, making it especially useful for divers, students, and researchers working underwater or in the lab. All training materials were provided to students, which included the Coral Finder Toolkit 2.0, a workshop guide and a magnifier for in-water inspections and coral identification, which we felt would be extremely useful for fieldwork.

Over two full days, we worked with a combination of specimens, desktop resources, audiovisual material and guided practical exercises. From these resources, we learned about coral anatomy, how coral specimens are collected, the recent advances in coral molecular taxonomy, coral behaviour, symbionts and how to recognise key characteristic features of coral taxa intuitively. We particularly appreciated curated photos of similar-looking live corals and corals with tentacles extruded or retracted – these images make it much easier for us to identify difficult coral specimens more confidently. The workshop also covered some non Scleractinian specimens that are easily confused with hard corals (E.g. Bryozoans and Octocorals). Being able to physically examine real coral skeletons helped us to understand how the inner structure of corals beneath the live tissue influences what we see on living corals.

Identifying coral skeleton specimens with the Coral Finder toolkit by examining their skeletal structure, polyp size and characteristic features.

Part of the course included timed picture quizzes for rapid identification of corals from single images. These were conducted at both the beginning and end of the workshop, and the whole class showed a marked improvement in coral identification accuracy after the training. This training has no doubt strengthened our coral identification skills and improved our confidence in applying these methods both underwater and during laboratory-based work.

Contacts: crystle.wee@my.jcu.edu.au; m.drake@aims.gov.au

Crystle Wee

Research Director Report

As we wrap up our 20th year, I'd like to reflect on some key activities and initiatives that have strengthened the collaboration and supported our AIMS@JCU community.

Celebrating Achievements and Supporting Growth This year, we granted a suite of Pilot Research, Science Communication and Professional Development awards that advanced skills across the key areas of field and vessel readiness, molecular and microbiome techniques, and laboratory and environmental DNA analysis, while additional Professional Development awards supported students attending the JCU Coral ID workshop. We also introduced an Early Career Research Development award, fostering collaboration between ECRs at both institutes, and proudly presented the first Indigenous Undergraduate Scholarship. Together, these initiatives represent a significant investment in people and capabilities, building the foundations for future leadership across our partnership.

Creating Spaces for Connection and Productivity Our annual Writing Retreat on Magnetic Island was a resounding success, bringing together ten students for focused writing sessions, yoga led by Dani Ceccarelli, and invaluable advice from Liz Tynan and our amazing postdoctoral fellows. These retreats continue to provide the perfect balance of productivity, mentorship and wellbeing, nurturing both academic progress and personal growth.

Building Skills and Knowledge The annual R-course with Murray Logan brought together 18 participants for a 2-week intensive at JCU, sharpening statistical skills and fostering collaboration. Our new seminar series also thrived, with inspiring talks from postdoctoral fellows. In 2026, we plan to broaden the series to include practical sessions on grant writing and other career-building skills. We welcome your ideas, please get in touch if there are topics you'd like us to include.

Celebrating Milestones and Community March saw AIMS@JCU students Martina Lonati, Eric Fisher, and Rachel Neil graduate, a proud moment for all involved. In September, we combined our Annual Seminar Day with the AIMS@JCU 20-year celebration. This two-day event featured exceptional student presentations, a cultural engagement day at AIMS with Uncle Eddie Smallwood and Gudjuda rangers, and a thought-provoking "You Can't Ask That" panel. The celebration concluded with a vibrant alumni function supported by JCU Advancement, showcasing videos that will continue to promote AIMS@JCU's impact.

Looking Ahead – 2026 and beyond We're excited to launch the "From Strategy to Synergy" workshop series, starting with AI and the Digital Ocean. In 2026, we will welcome three new PhD candidates and two Masters students. In addition, a GBRF grant awarded to Madeleine van Oppen, Matt Nitschke, Mia Hoogenboom and Ira Cooke, will support two more PhD candidates, each aligned with our coral resilience theme. Together, these initiatives will expand our research capacity, foster innovation and increase the level of support we provide to emerging researchers across the partnership.

Thank you to everyone who contributed to making 2025 a year of growth, collaboration, and celebration. Here's to building on this momentum in 2026!

Cherie Motti, AIMS@JCU Research Director

Contact: c.motti@aims.gov.au

Crystle Wee

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