

ATSIMS News

Aboriginals and Torres Strait Islanders in Marine Science



The **Aboriginals and Torres Strait Islanders in Marine Science (ATSIMS)** program is a James Cook University (JCU) marine science outreach program connecting First Nations high school students with industry leaders in marine science and management. ATSIMS engages Year 10 students by building connections between a number of organisations and knowledge systems. The ATSIMS team at JCU coordinate the delivery of field-based, experiential learning experiences, mini-practicals, and workshops led by a range of local and regional experts. We are proudly supported by a number of Traditional Owners and representatives, and Indigenous Land & Sea Ranger groups within the North Queensland region.

ATSIMS FEATURE

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Wahtjah Johnson, ATSIMS Volunteer, JCU Undergraduate Student, & AIMS Aquarist...

continued pg 9

2023 NAIDOC YOUTH AWARDS

We are thrilled to share that one of our **2023 ATSIMS Ambassadors Courtney Burns** was awarded the 2023 NAIDOC Youth Award out of nearly 200 national nominees!



"...the NAIDOC Week award finalists are believed to exemplify the spirit of NAIDOC..."

continued pg 10



FROM LEFT: Jess Smit, Dr Allison Paley & Courtney Burns in the ATSIMS office.



ATSIMS COMMENCEMENT

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To kick off our 2023 program we gathered at JCU's Bebegu Yumba (Townsville) campus in May for our inaugural Program Commencement with 13 participating schools, and over 85 enrolled participants! We were thrilled to have three new school partnerships in attendance this year - [Bwgcolman Community School](#), [Mungalla Silver Linings School](#) & [Southern Cross Catholic College](#). We began with a Welcome to Country spoken by Bindal TO and Indigenous Student Support Officer (IERC) [Eddie Savage](#), and a Smoking Ceremony presented by Eddie Smallwood (Bindal TO & [Gudjuda Ranger](#)), followed by words of welcome and inspiration from the Dean of the College of Science & Engineering, [Prof Ron White](#), and ATSIMS Coordinator [Dr Allison Paley](#). We were also grateful to be joined by the DVC Indigenous Education & Strategy at JCU, [Prof Martin Nakata](#).

Our first lecture about the Great Barrier Reef was delivered by Julie Spencer from the [Reef Education](#) team at the [Reef Authority](#), including a discussion with then Director of Traditional Use of Marine Resources Agreements ([TUMRA](#)) John Tapim, about his role and being a young Indigenous kid finding his way. Then educators Craig, José and Melissa led us through a series of workshops exploring Turtle Identification, Dangerous and Deadly Creatures, and the Crown of Thorns Starfish Control Program.



Students in the Science Place for an online discussion with John Tapim from Reef Authority

PICS FROM COMMENCEMENT



Students from Kirwan SHS 'measuring up' beside a giant Leatherback sea turtle

© Bridget Ferguson



Heatley SC students with CEC Jasmine Lee



Kirwan SHS student Mylani taking in the enormity of a Leatherback sea turtle!



Students from Kirwan SHS learning about sea turtle diets



Sea turtle skulls come in many shapes and sizes...



Thuringowa SHS students 'measuring-up' along our giant Leatherback sea turtle



Students practising turtle ID skills

ATSIMS participants gathered around the display tank at Goolboddi

 Bridget Ferguson



ORPHEUS ISLAND RESEARCH STATION

The 3-night stay on Goolboddi (Orpheus Island) while based at JCU's [Orpheus Island Research Station](#) is always a program highlight for staff and students! We had 3 back-to-back groups of students, school staff, and many leading experts from our industry partners in attendance over the course of 10 days on the island.

During our time on Goolboddi students immersed themselves in the marine environment, participating in four citizen science programs and a creative arts project requiring them to snorkel, hike, reef walk, travel in small boats, and collect and report data!

Each day is jam-packed and at times, both physically and mentally challenging for all participants. We were so impressed with our young people for rising to the challenges we set, to work as a team by forming new friendships, and to try new things they hadn't yet developed confidence in!

During their stay, participants were introduced to citizen science with Julia from [Reef Ecologic](#) and Bridget from [CoralWatch](#). Students learned about coral bleaching and the need for every day citizens to help monitor our Great Barrier Reef.

Students used new skills in coral identification to survey more than 350 coral colonies from around Goolboddi! Their data was added to the CoralWatch global database through a hands-on data management session using laptops. ATSIMS Project Officer Jess undertook the first set of rapid long-plot surveys for [MangroveWatch](#) with small groups following her training in MangroveWatch survey techniques earlier in May (see page 18). Students were encouraged to join [iNaturalist](#) and share their phone pics of the island flora and fauna as 'observations' on the global database. And lastly, we continued our clean-up efforts on the exposed side of the island by removing more than 250 kgs of marine debris! Students and teachers sorted the debris into categories, counted them, and reported their findings through the Australian Marine Debris Initiative [app](#) with the help of Tia from [Tangaroa Blue](#).

We were all touched by reflections shared around the fire; a trip I'm sure we will all reflect on for much time to come.



Goolboddi (Orpheus Island)

MARINE DEBRIS SCULPTURES & ARTWORK

We got creative with the marine debris we collected and while we're busy working on a digital display of the students' artwork with the JCU Library - enjoy these pictures of some of their pieces in process and on display at our program Graduation!



Vaughn with his original artwork

© Bridget Ferguson



An aquarium displaying underwater life made from marine debris



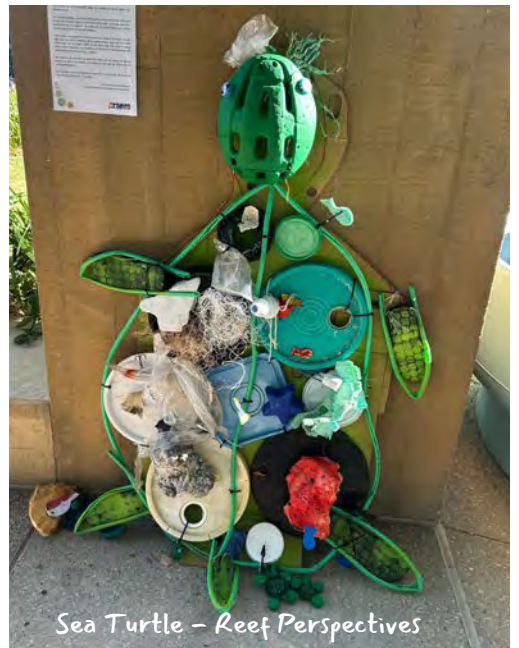
'D' for Goolboddi with painted stones



Sea turtle in process...



Sea turtle in process...



Sea Turtle - Reef Perspectives



Putting finishing touches on the marine debris mantaray



The mantaray will be displayed at Goolboddi.



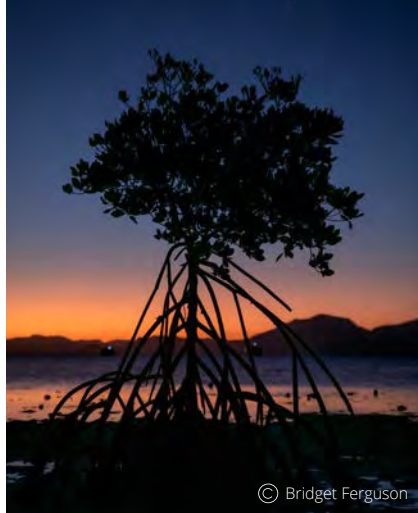
Scuba Guy!



PICS FROM ORPHEUS ISLAND



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Orpheus Island National Park

James Cook University Research Station

PICS FROM ORPHEUS ISLAND



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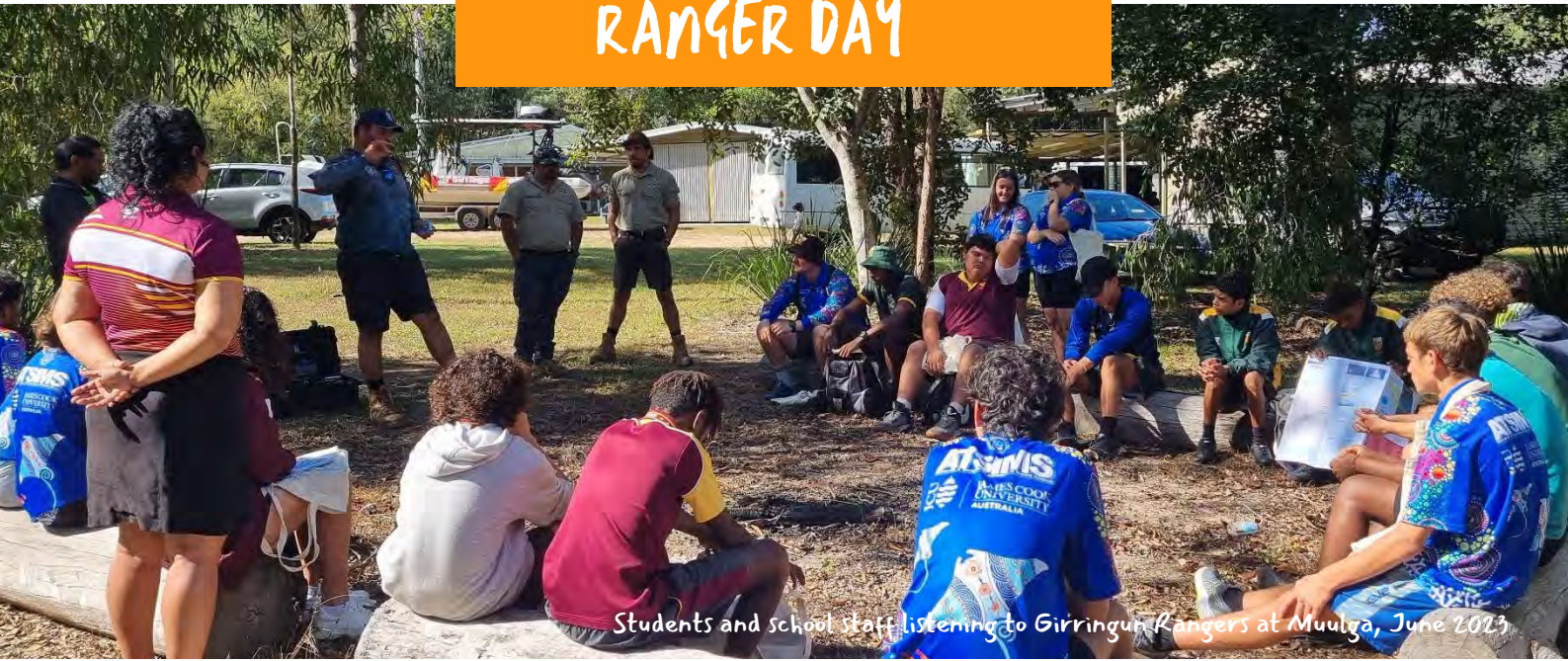


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RANGER DAY



Students and School staff listening to Giringun Rangers at Muulga, June 2023

A new component to the ATSIMS program in 2023, Ranger Day, was collaboratively developed with the Gudjuda Reference Group Aboriginal Corporation and Giringun Aboriginal Corporation Land and Sea Rangers to highlight the roles of rangers in the Country they manage. ATSIMS has a long history of collaboration with the rangers and have previously engaged with them in the classroom and in the field. However, this is the first time all ATSIMS students have been able to spend time on Country with the ranger groups from their area to learn about the diversity in their roles and their personal journeys into them. We divided our large ATSIMS cohort of schools and students into two groups based on location and spent two back-to-back days alongside the rangers connecting with them and Country:

GUDJUDA RANGER DAY

The ATSIMS crew travelled to Ayr Surf Lifesaving Club at Alva Beach just outside of Ayr to meet [Heatley Secondary College](#), [Kirwan SHS](#), [Pimlico SHS](#), [Southern Cross Catholic College](#), [St Margaret Mary's College](#), and [Thuringowa SHS](#). Bindal Traditional Owner and Gudjuda Ranger Jim Gaston led us in a Welcome to Country before we were joined by Hannah Kennedy from [Tangaroa Blue Foundation](#). Hannah helped us to conduct a marine debris clean-up, including sorting the rubbish we collected for the well known [Australian Marine Debris Initiative](#) citizen science database. We then spent time learning from Rangers Jim, Diane and Tracey about their pathways into the careers and roles they share, and we even boarded their new vessel! The weather was a little ordinary, but our ATSIMS students dived in and got the job done. Overall, within just 1km of beach we removed 62.36 kgs of rubbish!

GIRRINGUN RANGER DAY

Next we travelled to Muulga - Edmund Kennedy Section of Girramay National Park just outside of Cardwell to meet [Ingham SHS](#), [Mungalla Silver Linings School](#), [Northern Beaches SHS](#), [St Anthony's Catholic College](#), [St Teresa's Catholic College Abergowrie](#), and [William Ross SHS](#). Local artist and Girramay Traditional Owner Nephi Denham led us in a Welcome to Country and then guided us in a weaving activity - this took a lot of patience! We were fortunate to meet a few local Elders who also share use of the facility to create art. The Giringun Rangers led us in a series of mini-workshops that showcased the many roles of a Ranger, including unpacking Great Barrier Reef zoning laws, and role-playing compliance scenarios using their equipment. We even got to check out their vessel before collecting our goodie bags and heading back to town.

PICS FROM GUDJUDA RANGER DAY



Students and school staff with the Gudjuda Rangers, June 2023



Students and rangers connecting



Time to play after all the work is done



Sorting marine debris into categories like glass



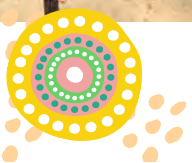
Marine debris collecting



Checking out the new turtle catching boat



Marine debris collecting



PICS FROM GIRRINGUN RANGER DAY



Students and school staff with the Girringun Rangers, June 2023



In the artists' shed



Weaving!



Finished product!



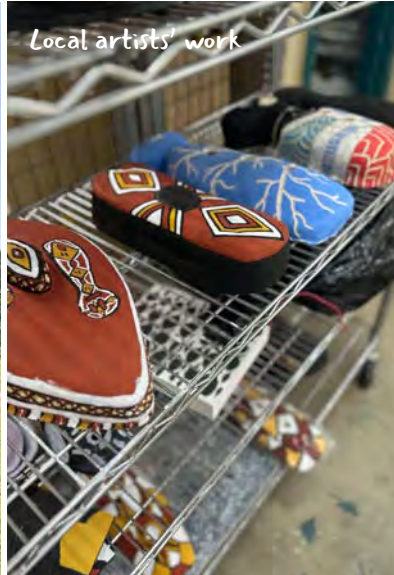
Discussing reef zoning with the rangers



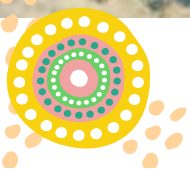
Finished product!



students checking out the features of Girringun's vessel during a role play scenario on compliance



Local artists' work



AUSTRALIAN INSTITUTE OF MARINE SCIENCE



Discussing coral reproduction and growing techniques in SeaSim

© AIMS | Jo Hurford

Our annual visit to the Cape Cleveland site of the [Australian Institute of Marine Science](#) (AIMS) - recently named in the language of the Bindal Traditional Owners as Nilgoolerburdda - was full of inspiration, astonishment, and networking. After an Acknowledgement of Country by Indigenous Partnerships Team member Carl Grant and an official welcome to AIMS by Libby Evans-Illidge and Cherie Motti we divided into tour groups. We were led on our tours by our very own [ATSIMS Alumni](#) Adam Napier and also Wahtjah Johnson who are both Aquaculture Trainee Graduates, AIMS Indigenous Training & Capacity Building Officer Jordan Ivey, and [AIMS@JCU](#) Indigenous Partnerships Administration Officer Darin Gaw.

During our tours we visited the [National Sea Simulator](#) (SeaSim), the world's most advanced research aquarium facility delivering world-leading coral reef science. We then explored technology and virtual reality developments with the institutes engineers, and even had a turn using the virtual simulation to safely navigate coral reefs. We toured the engineering workshop where we learnt about the creation and innovation of tools to support current research projects.

We finished with a yarning session led by some deadly First Nations guests who openly shared their journey from high school to now, including the struggles and the successes they experienced.

Finally it was time to head home and ponder all the amazing things we were fortunate to share! Big thanks to the Indigenous Partnerships Team, AIMS@JCU, the Research Office, and Pia Wimmer for all their efforts in coordinating these events.



Admiring the aquaria in SeaSim

PICS FROM AIMS



Looking at coral larvae

© AIMS | Jo Hurford



ATSIMS Group 2



Admiring the aquaria in SeaSim



Working with the engineers in simulated reality

© AIMS | Jo Hurford



Crown of Thorns starfish

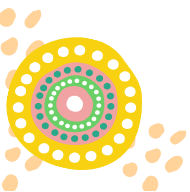


Admiring the aquaria in SeaSim

© AIMS | Jo Hurford



Looking at coral larvae



ATSIMS GRADUATION

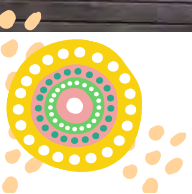
On June 19, we gathered at JCU's Bebegu Yumba (Townsville) campus to celebrate our accomplishments and take a closer look at the learning and research spaces on campus. Our day began with a Welcome to Country, a smoking ceremony, and cultural dancing from Bindal Traditional Owners, Aunty Jenny Wyles, Uncle Alfred Smallwood and the [Wulgurukaba Walkabouts Dancers](#). We enjoyed a leisurely morning tea while viewing the student-created artworks on display at Central Plaza together with our partners, school students and staff, and ATSIMS staff. Our day included three rotating workshops that took students all across campus. The first stop was an aquaculture-themed mini-practical laboratory in the Science Place laboratory with academics [Dr Leo Nankervis](#) and [Dr Mark Cyrus](#) learning about the roles that culturing microalgae and *Artemia* (sea monkeys!) play in supporting fish stocks. The students got to view important commercial animals including tiger shrimp, and spiny lobsters and investigate the cultures with stereo microscopes. The next stop was the [Marine and Aquaculture Research Facility's](#) (MARF) Learning and Teaching space to learn about fish handling with black groupers,

barramundi breeding, ornamental fish husbandry, and the research being conducted on epaulette sharks in the [PhysioShark](#) lab with [Prof Jodie Rummer](#) and students. The last stop was to the computer labs over by the Indigenous Education and Research Centre (IERC) where they got familiar with [QCE SET planning](#) - selecting subjects for their senior years in school (years 11 and 12) and the requirements of their individual schools. We encourage our students to pursue STEM subjects in science and math, but we also support their diverse career aspirations that were shared during these sessions. We appreciate the teaching staff for helping the students understand the requirements for both tertiary and vocational training pathways. After lunch, we gathered together once again in Central Plaza to present all participants with certificates of completion on behalf of the ATSIMS program. We were especially excited to present awards for further learning and engagement opportunities to students who showed a strong interest in career pathways in the marine science and management field. See below for details on the awards and lucky recipients!

ATSIMS students after graduation outside the Science Place



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PICS FROM GRADUATION



Wakgurukaba Walkabouts

© Bridget Ferguson



Pimlico SHS receiving certificates of completion

© Bridget Ferguson



Students with epaulette sharks

© Bridget Ferguson



Students in the computer workshop

© Bridget Ferguson



In the lab!



Students in the Science Place



Dr Leo and Dr Mark in the lab



Handling black grouper



Viewing Artemia under the microscope



24 Hour Culture



Handling black grouper

© Bridget Ferguson



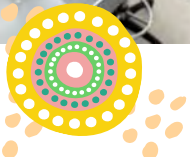
Viewing Artemia

© Bridget Ferguson



Handling black grouper

© Bridget Ferguson



RECOGNISING EXCELLENCE

ATSIMS is proud to recognise student excellence with future opportunities for engagement with industry leaders. We are incredibly grateful to our partners for making these opportunities available to further our students' learning experiences and skillsets. We are thrilled to announce the following awards presented to stand-out students:



Earth Watch Student Challenge Scholarship: Attendance at Earthwatch Institute Australia's annual Student Challenge camp at Boyne Island Environmental Education Centre - Sept 2023

Awardee: Shamira Assan (Ingham SHS)



AIMS Work Experience: Work experience placement at Australian Institute of Marine Science in years 11 or 12.

Awardees: Nylani Namai (Kirwan SHS), and Paige Tanner-Hill (Bwngcolman Community School).



Mentorship Program: Attendance at the Reef Leadership Workshop at Orpheus Island Research Station, and participation in a mentoring program through Reef Ecologic.

Awardees: Ekyuna Blanket-Reuben & La'tayah Purcell (Mungalla Silver Linings School).



Workshop Scholarship: Attendance at the Reef Leadership Workshop at Orpheus Island Research Station through Reef Ecologic.

Awardees: Marcus Willshire (Kirwan SHS), Kellie-Lee Dynevor (Mungalla Silver Linings School), and Aiden Raciti (Southern Cross Catholic College).



Free Diving Course: Free Diving Certification for Wave #1 up to 12 metres with Bridget Ferguson.

Awardees: Vaughn Charles, Eldridge Murray, Ozzy Poynter-Palmer and Paige Tanner-Hill (Bwngcolman Community School).



Citizen Science Award: For outstanding contributions to the global CoralWatch database.

Awardees: Evandah Bann & Marsat Newman (St Teresa's College) Gemma Ruff & Georgia Sullivan (Southern Cross Catholic College), Linda Joseph (Kirwan SHS), and Daniel Fewquandie (Northern Beaches SHS).

ATSIMS FEATURE CONTINUED...

Wahtjah is a proud Kaanju, Waanyi, and Bwgcolman man. Growing up on Palm Island, swimming and exploring the oceans and beaches around the island sparked an interest in marine life. He moved to Townsville to further his education where he studied Aquaculture at Kirwan SHS.

During school Wahtjah accepted an Aquaculture traineeship through the Australian Institute of Marine Science, which evolved into a marine science orientated traineeship. After graduating from Kirwan SHS in 2020, Wahtjah secured a full-time position working as a researcher within the Reef Restoration Adaptation Program (RRAP) at AIMS.

Wahtjah joined the ATSIMS crew this year during their trip to Goolboodi (Orpheus Island). He said it was a great experience overall, but his favourite part was watching the ATSIMS students come out of their shells and form close friendships with one another in such a short space of time.

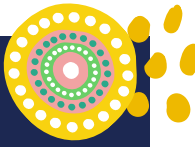
Wahtjah has also recently begun his undergraduate studies at JCU undertaking a Diploma of Higher Education with plans to continue into the Bachelors of Marine Science or Marine Biology!



"Being part of the ATSIMS crew has really been an eyeopener for me, seeing young men and women developing friendships and new skills and their love for the ocean... I was really thankful to be part of this, and I hope that this program continues to grow and reach more Indigenous youth!"



NAIDOC YOUTH AWARDS CONTINUED...

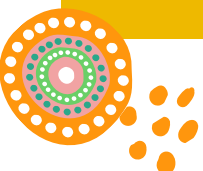


We were thrilled to have Courtney participate as an Ambassador this year! Her passion and enthusiasm for the marine environment was a huge inspiration to our students, and she was integral in organising our Graduation day excursion at the Physioshark Lab at JCU!

If you haven't already heard, young Indigenous woman Courtney Burns is making waves across the science industry and our wider Community. Courtney is deeply involved in the Indigenous Education Research Centre at JCU and apart from taking out the National NAIDOC Youth Award in 2023, some of her other more recent achievements include:

- 2023 - Promotion from Volunteer to Assistant Lab Manager/Volunteer Coordinator at the Rummer Lab, James Cook University within the Physioshark program.
- 2022/2023 - Aurora Internship Program recipient.
- 2022 - Indigenous Academic Achievement Award for Marine Science presented through IERC at JCU.
- 2022 - Google Future Leaders in STEM Scholarship recipient.
- 2022 - Recognised & acknowledged by CSIRO for Academic Excellence, offered a casual Research Technician position.

"Being an Indigenous woman in STEM has led me to suffer a severe case of 'imposter syndrome' throughout my studies... I am constantly wondering if I'm good enough to make it in such a competitive field of study and research. Doing work experience with CSIRO has allowed me to believe in myself and push through the confidence barriers I've been facing the last two years. It has made me excited for when — not if — I have a career in research."



BECOMING A MANGROVE CHAMPION

Shoutout to [Earthwatch Institute Australia](#) and [MangroveWatch](#) for inviting ATSIMS Project Officer Jess to join other school teachers from a number of Great Barrier Reef schools at Holloways Beach Environmental Education Centre for a 6-day expedition. Jess spent the week gaining knowledge, tools, and resources needed to initiate student and community citizen science assessments of both mangrove and salt marsh habitats!

Jess learned how to undertake and on-teach:

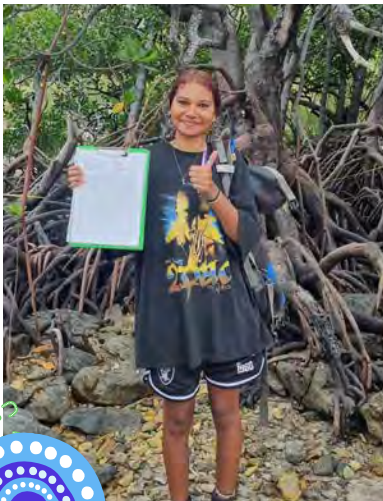
- Mangrove forest health assessments using the Rapid Long Plot method
- Assessing mangrove crabs as bio-indicators of mangrove health
- Rapid assessment of tropical salt marsh ecosystem values and threats

These skills were put straight into use the following week during our program visit to Goolboodi (Orpheus Island) alongside students, teachers and community representatives.

The data we collected was the first of its kind on the island as ATSIMS forges a new citizen science effort. Jess was also successful in her grant application to create MangroveWatch field kits for JCU and Palm Island schools which will support future mangrove forest health assessments!



"I honestly had no idea just how critical mangroves and salt marsh are for the Great Barrier Reef! Getting muddy on the expedition and then putting it into practice with ATSIMS was a real highlight..."



"I can't wait to see how this grows through our community, and the best thing is that ANYONE can be a MANGROVE CHAMPION!"





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LET'S GET SOCIAL!

Reach as at our new email alias: atsims@jcu.edu.au and as always keep posted for updates to our JCU [website](#). We're also on a number of social media platforms, simply click the logos below and start connecting!



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OUR SPONSORING PARTNERSHIPS

These organisations support ATSIMS financially or with in-kind support (or both!). Click the logos below to visit their websites. If your organisation would like to sponsor the program - please get in touch!



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An initiative of the Reef Authority



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Reef Ecologic
For a better planet



Australian Institute of Marine Science

