

INSIDE THIS ISSUE

President's Report	2
SeaweeK 2022 Webinar	4
The Black Bream Project:	4
Deep Sea Discoveries	5
European Initiatives Update	6
Decade of Ocean Science	7
Wellington Caves NSW	8
Bush Blitz connects students	9
Numinbah Valley Education Centre	10
Connecting through Art	11
Member Spotlight	11
Sustainable Fishing Activity	12
TAS Chapter Update	13
NSW Chapter Update	13
ACT Chapter Update	14
QLD Chapter Update	15
VIC Chapter Update	15
SA Chapter Update	16
WA Chapter Update	16
Reviews	17-18
Upcoming Events	19
National Executive Council	20

2022 SeaweeK Wrap

By Sarah-Jo Lobwein
SeaweeK Coordinator

2022 SEAWEEK (5-13 March) was celebrated across Australia focusing on the theme: **Our SEArch - what will you discover?** This theme was based on the Ocean Literacy Principle #7: The Ocean is largely unexplored. Inspiration for this year focused on discovery, exploration, research and understanding - seeing the unseen, exploring the unknown and known by rediscovering what we think we already know, and the broader exploration of resources AND ecological relationships (from deep sea exploration all the way to what we can discover in our rockpools, sand samples and water samples and inside cells).

Further stimulus topics include There is nothing shallow about exploration; Exploration research - rock pools to deep sea ravines and Uncharted waters above and below. For example, one of my favourite "investigations" from the last few years has been the unique marine discovery by 10-year-old Rehan Somaweera (and his dad Ru), becoming one of the youngest people in Australia to author a published scientific paper. What they discovered is known as nuclear-follower behaviour, which itself is not new, but Mr Somaweera, a behavioural ecologist, said it was not known among these two



Ziggy Silva has shared with us his "discovery" during SeaWeek - can you identify what Ziggy has found washed up? More photos page 3.

creatures. Rehan discovered the brown-spotted wrasse followed the WA common octopus around as it uses its tentacles to forage for food, making it easier for the fish to also score a feed. The pair spent time watching and recording what they saw across four different reefs in Perth.

<https://www.publish.csiro.au/mf/MF21059>

More than eighty per cent of the ocean remains unmapped, unobserved, and unexplored. Australia has one of the largest ocean territories in the world, driving our climate and weather, generating employment, providing resources and food, while offering lifestyle and intrinsic opportunities. The ocean regulates our climate, creates over two thirds of the planet's oxygen (and absorbs carbon dioxide), constructs shorelines, provides medicines and energy we utilise to live and covers over seventy per cent of the Earth's surface area - imagine what we have not discovered yet! There are many marine animal and plants inhabiting this great ocean, including the Southern Rock Lobster. Lobsters are large marine crustaceans,

Cont'd page 3

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President's Report

Jennifer Pearson



Events

If you have any events that you would like published in ozEEnews please send the name of the event, date and time, venue, and a contact email address to ozeenews@aaee.org.au

Deadline for contributions to next edition is 1 June 2022.

Intending contributors should forward material by e-mail to ozeenews@aaee.org.au

Electronic format is preferred. Artwork and photographs should be provided at 100dpi, postcard size, minimum.

Articles may be features, reports, events, snippets, reviews, etc and should be less than 500 words.

Decisions about publication are the responsibility of the editor. *ozEEnews* accepts advertising. Charges are available on request to the editor.

SeaWeek has been a huge success and we thank Sarah-Jo Lobwein for all her coordination of the many initiatives and activities that emerged over that week. There is a significant interest in our Marine education and activities and we look forward to continue to build on this over the Decade of Ocean Science for Sustainable Development (2021-2030).

The National Executive is embarking on a campaign to inject energy into the collective work that we all undertake. We are preparing to continue our conversations with governments at all levels to encourage them to see the value in resourcing our schools as hubs of sustainable resilience. The recent events on the east coast continue to reinforce the urgency to act. Watch the EBulletin to see details of how you can join the subcommittee for EfS campaign. You can email Stephen Fuller on efscampaign@aaee.org.au for more details.

Enjoy the special edition of SeaWeek and so many uplifting stories and information.

Thanks.

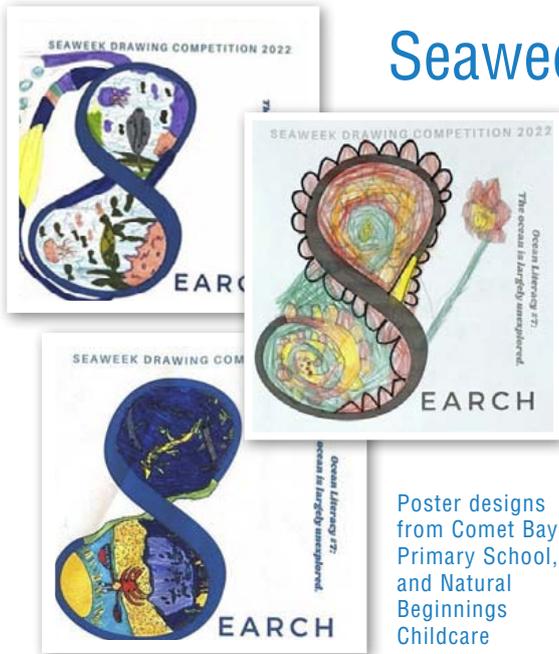
Dr Jennifer Pearson

President AAEE

Thank you to contributors

Thanks go to all the members who contributed articles for this edition and tony@parslowart.net for the desktop publishing.

Seaweed Wrap cont'd



Poster designs from Comet Bay Primary School, and Natural Beginnings Childcare



a highly prized seafood industry and can be found in various coastal areas of Australia. If we want marine life to exist for future generations, all fisheries in Australia (and globally) need to be managed sustainably. Please check out the educational "Go Fish" activity by George the Farmer we have included in this newsletter, or I have personally renamed "Go Crustacean" because although we may call them a type of shellfish, a lobster is not a species of fish! And a jellyfish is not a fish, a sea star is not a fish ...

SeaWeek initiatives included the following.

March also includes Sustainable Seafood Week. Marine Stewardship Council hosted a wonderful Saltwater Schools educational resource this year with the Gujaga Foundation, teaching us the Dharawal words for marine features and animals. Do you know the First Nations words for your local marine animals? Let us know!

Another language to incorporate into the classroom is sign language. Do you know how to sign for ocean animals and features? Check out this video on AUSLAN lesson on sea: https://youtu.be/vkM_yZQQUM

This year's SeaWeek was a perfect beginning for the Royal SA Yacht Squadron (RSAYS) to develop their Ocean Literacy training program for their Sea Cadets. Keep an eye out for the Blue Water Summit in June.

AAEE and AJEE have also come together to provide 4 articles offered for free to everyone. (AAEE members can access these at any time) <https://tinyurl.com/AJEE-SEAWEEK>

longer link : <https://www.cambridge.org/core/journals/australian-journal-of-environmental-education/collections/marine-environmental-education>

We had some great competitions hosted and co-hosted, with special thanks

to Magnetic Island Ferries, Sailfish, Save our Symbionts, Storytorch and Candice Lemon-Scott for copies of Ocean Warriors: The Rise of Robo-Shark, and weave baskets by our AAEE President! Congratulations to our winners Ziggy Silva, Comet Bay Primary School, and Natural Beginnings Childcare.

It began with a poster design competition in a Facebook feed – *design a poster for Sea week*. We decided it would be a good project for the children to work on, a collaborative piece pondering upon the theme – 'Our SEArch - What Will You Discover?' with a couple of learning objectives attached. One was to ignite their curiosity about the world that exists in our vast oceans, and secondly to demonstrate that they have a voice and messages can be communicated via many mediums.

This led us on a journey to take a closer look at our oceans using:

- maps to illustrate their size,
- reference books with stunning imagery to learn from and promote conversation, and
- toy model animals mixed with seashells and sand to make an immersive play experience.

But what really caught the children's attention was the videos featuring the unusual life found in the 'deep ocean'. Creatures that were strange shapes, ones using bioluminescence to capture prey – that's what ignited their imaginations. And so began the project, with a small group preparing the background and then small pieces of children's work added on collage style. It was lovely to see one of the children (who rarely sat at the art table) take on the mission of portraying deep-sea creatures, keenly participating in the project and producing an abundance of work.

The project was a great experience for the class with both children and educators enjoying the learning experience.

Don't forget the Save our Symbionts Competition is open until the end of March! Please also check out our Instagram highlights for resources



classified into Early Years, Primary and Secondary www.instagram.com/seaweekaustralia/

Our free learning circle SEAWEEK webinar is described in the newsletter, thank you Barbara Sing for an informative discussion about coordinating a school based project.

Find #seaweekaustralia activities and competitions on our website: <https://www.aaee.org.au/events/seaweek/>

Visit the SeaWeek Australia Facebook page and The Australian Marine Education Network to stay in touch with national events and connect with us on Instagram and Twitter.

This years tags:

#olp #olp7 #oceanliteracy #oceanliteracyprinciples #oursearch #whatwillyoudiscover #theoceanislargelyunexplored #oceanecade

We would love to hear your stories and activities that link learning about the connections between land and sea, or learning about the ocean affects you no matter where you live in Australia - send them in so we can share!

SeaweeK 2022 Webinar

The Black Bream Stock Enhancement Project: Pilot Programs don't follow the rules!

By Barbara Sing

Teacher, John Tonkin College

Black Bream have been a key recreational fish species in the rivers of the Peel-Harvey Estuary for the Mandurah community however, the population has faced decline over recent years. The reasons for this poor decline are unclear, but possible causes include unsuitable water quality during spawning or loss of adult females capable of breeding from recurring fish kills over the past decade or so.

Analysis of the Bream fishery by Dr Alan Cottingham and his team from Murdoch University found the Black Bream were both old and appearing in very low numbers. This led to an ambitious plan hatched with Peel Harvey Catchment Council to involve students from John Tonkin College in a pilot program to raise juvenile Bream for release into the Murray River as a way to support the ongoing survival and viability of the Black Bream fishery. John Tonkin College transformed a classroom into an aquaculture laboratory designed by Aquaculture Lecturer Dr Ben Roennfeldt. Under the supervision of teachers Barbara Sing and Amanda Zele, students from the school's specialist "Surf Science" program helped construct the system where they grew algae, raised rotifers and artemia (zooplankton) for food. December 2019 saw a combined 2300 juveniles released into the Murray River.

Although the challenges in this pilot project have been many including; changing and modifying ideas and equipment, water parameters, relocation twice within the school, flooding a room, the massive time commitment outside class time and of course COVID the positives have far outweighed them. The experiential learning by our students has given them the opportunity to be involved in real world science applications raised their awareness about the fragility of our local ecosystem. Our students have been keen to raise awareness about the health of the Black Bream habitat through the Peel Bright Minds Video, Kids Teaching



Black-Bream-Project



Pink and Barbara

Kids, visiting Primary Schools and working on a VR experience for those unable to attend our school to view the project.

Biography

Barbara Sing is a passionate environmental educator whose mission is engaging youth in biodiversity monitoring. She is a committee member on several environmental groups including Estuary Guardians, Mandurah Volunteer Dolphin Rescue Group, Mandurah Heritage and Environment Group, Peel Preservation Group and

The Clean Waterways Group.

She teaches Surf Science and Bushranger Cadets in Years 7-9 at John Tonkin College and enjoys taking students out into the field for experiential learning. Students in the Surf Science Program are involved in a range of initiatives including Fishing line Bins, Shorebird Education, Estuary Guardians and the Fin Guide, the Bream Project and the Shellfish Farming Project with partners including Peel Harvey Catchment Council, Murdoch University, The Nature Conservancy and the City of Mandurah.

Deep Sea Discoveries

By Sarah-Jo Lobwein

SeaWeek Coordinator

Here at SEAWEEK HQ we were planning on sharing information all week about deep sea animals, when two big discoveries by marine archaeologists took over the news! The controversial HMS Endeavour reported to have been discovered in February off the coast of Rhode Island in the United States. Then during SeaWeek, the Endurance, the lost vessel of Antarctic explorer Sir Ernest Shackleton, was found 3008 metres at the bottom of the Weddell Sea by the Falklands Maritime Heritage Trust.

During what was meant to be the first land crossing of Antarctica, Endurance became trapped and was crushed by sea-ice and sank in 1915, forcing Shackleton and his men to make an astonishing escape on foot and in small boats. Even in this age of satellites and metal icebreakers, locating the Endurance has been an almost impossible task due to the polar conditions. The Weddell Sea is usually covered in thick sea-ice, the same sea-ice that ruptured the hull of Endurance a century ago. The pack ice constantly moves in a clockwise direction closing in. Getting near the presumed sinking location is hard enough but imagine being able to conduct a search! However, this past month has seen the lowest extent of Antarctic sea-ice ever recorded during the satellite era, which stretches back to the 1970s. These conditions were unexpectedly favourable for the discovery, but the lack of sea ice is warning sign of what is happening to sea ice area.

But how did they know where to search?

When Endurance sank, her approximate location was calculated by her navigator and captain, Frank Worsley, using the maritime navigation instruments the sextant and chronometer. It was an overcast day, so Worsley could not use the sun to fix its position. Instead, he used previous days' sextant readings and estimated the direction of ice drift

to plot the rough coordinates of where the punctured Endurance slipped below the floes. It's in his logbook as 68°39'30" South; 52°26'30" West.

But how accurate was this? Three modern-day researchers - Lars Bergman, David Mearns and Robin Stuart - long pondered this question. Their main concern was the performance of the marine chronometers, or clocks, used by Worsley to get a longitude fix. Previous work by Bergman and Stuart had suggested these were running much slower than the crew of the Endurance had realised or accounted for - an error that would put the sinking west of Worsley's recorded position. But Mearns picked up a critical error in the clocks' calibration that pulls the location back and off to the east. Their investigation highlights the story of Reginald "Jimmy" James, the ship's physicist on Shackleton's Imperial Trans-Antarctic Expedition, who showed Worsley how he could work out the drift in the timekeeping of the chronometers from lunar occultations. <http://fer3.com/arc/m2.aspx/Will-anyone-ever-find-Shackletons-lost-ship-Stuart-feb-2022-g52047>

To try and locate the wreckage more than a century later, the Endurance22 team plotted a search area around Worsley's estimated coordinates and used hybrid underwater vehicles in 2019 to search the seabed looking for shapes and anomalies. Operating from the South African-registered research ship, the Agulhas II, this earlier effort managed to get over the sinking location. Once on site during this previous expedition, they deployed an autonomous underwater vehicle (AUV) to survey the seafloor, but after 20 hours below, the robot dropped communications and that sea-ice then closed in to force the Agulhas II to retreat.

For this latest 2022 search, the chosen submersible (Saab Sabertooth) was tethered via a fibre-optic cable. When the wreck was sighted, the survey halted, and the process of documentation immediately

began. Endurance22 had two Sabertooths, fitted with long-range side-scan sonar which supplies images of the seabed to the scientists on the topside (on the surface), either on board the ship or in the tent of the ice camp. Says Nico Vincent, "If a target appears beside the vehicle, we can, at the flick of a switch, interrupt the task plan and fly like a drone to the target to double-check it."

For over two weeks, these subs combed the predefined search area, just 8km by 15km (4 by 8 nautical miles) investigating various interesting targets, before finally uncovering the wreck site on the 100th anniversary of Shackleton's funeral. Endurance was located roughly 4 miles south of Worsley's estimated position! The days since the discovery have been spent making a detailed photographic record of the timbers and surrounding debris field.

Deep sea and polar biologists identified the wreck has been colonised by diversity of deep sea marine life - but appears to have little wood deterioration. The type of worms that normally consume sunken wooden ships do not thrive in the cold conditions of the polar south. The Weddell's bottom-waters are oxygenated, which means many other types of organisms colonised the wreck including stalked sea squirts, anemones, sponges of various forms, brittle stars, and crinoids (related to urchins and sea stars), all filter feeding nutrition from the cool deep waters of the Weddell Sea. Creatures such as sea squirts pump water in and out through their two syphons to collect plankton and "marine snow" falling from the sea surface. A Squat lobster was also spotted!

Dr. John Shears, the polar geographer who headed the Endurance22 expedition, said, "we have made polar history with the discovery of Endurance, and successfully completed the world's most challenging shipwreck search. We have also conducted an unprecedented educational outreach programme, with live broadcasting from onboard, allowing new generations from around the world to engage with Endurance22."

European Initiatives and Early Childhood Education For Sustainability

By Adjunct Professor Julie Davis (QUT) and Dr Sue Elliott (UNE)

In August 2021, Professor Julie Davis (QUT) and Dr Sue Elliott (UNE) were invited by Professor Daniella Tilbury to develop a number of 'pledges' related to early childhood education for sustainability (ECEFS) to support the CoP 26 event, The Joint Event of Education and Environment Ministers Summit - Together for Tomorrow: Education and Climate Action'. This was hosted by the United Kingdom Department for Education, in partnership with Italy, UNESCO, Youth4Climate, and Mock COP.

Pre-Summit the pledges were presented, reshaped and circulated to all relevant ministers to assist in forming individual national pledges across education and environmental/sustainability concerns. The Summit, chaired by Professor Tilbury, included Education Ministers, Ministers responsible for Climate Change, and Ministers with responsibilities for Young People to discuss the importance of education in creating climate positive futures. The session was recorded <https://lnkd.in/d-8drcy7> and showed a strong commitment and numerous direct pledges from many countries to embed transformative EFS into their education systems. There was repeated

reference to EFS needing to start in ECE and the necessity for teacher education around climate change, climate action and sustainability. Post-Summit there are ongoing plans to take the 'pledges' agenda forward so that all Ministers (and nations) who made specific pledges should report at every CoP meeting from now on (the next one is 2023 Egypt).

In November 2021, Prof Tilbury sought our input again, this time on behalf of the European Commission to contribute to new initiatives on environmental/sustainability education for the European Union (EU). Led by the Directorate-General for Education, Youth, Sport and Culture, we share two newly released documents:

- The European Commission's Proposal for a Council Recommendation on learning for environmental sustainability. The Proposal sets out 9 recommendations for member states to urgently step up their efforts to support education and training systems to take action for Europe's green transition so that for 'learners of all ages and from all backgrounds can access high-quality and inclusive education and training on climate change, biodiversity and sustainability' (p.10). Clearly emphasised is for early childhood education to play a key role as the starting point for ongoing EE/EFS.

<https://eur-lex.europa.eu/>

- Staff Working Document on Environmental Education for Sustainability. This details the concepts and recommendations put forward in the Recommendation above, presenting research evidence and good practice from across Europe. It serves as a guide for policy makers, educators and all individuals and organisations working on environmental sustainability in the EU education and training sectors. The Staff Handbook involved wide public consultation including early childhood educators and emphasises the growing recognition of ECE and its contributions to EE/EFS.

<https://education.ec.europa.eu/>

It is notable that Australian researchers are contributing to these European initiatives. Prof Tilbury was especially keen to include our voices and perspectives as she recognises Australian leadership in the field of ECEFS, nationally and internationally. We were honoured to be invited to distil our ideas and experience going back over 30+ years and to contribute to ongoing efforts in EE/EFS in Europe. We hope this work will assist in the current drive for the Australian early childhood curriculum to include a new sustainability principle.



Getting started with
Sustainability in Schools

Sustainability in schools: Teaching resources

There are a range of classroom-ready resources for all subjects, available for teachers from the Getting Started with Sustainability in Schools website.

Search the Resources Portal at www.sustainabilityinschools.edu.au

It's time to get started with sustainability in schools.

Decade of Ocean Science for Sustainable Development (2021-2030)

By Sarah-Jo Lobwein,
SeaWeek Coordinator

We are now quarter of the way through the second year of the United Nations Ocean Decade. The Decade of Ocean Science for Sustainable Development (2021-2030) to support efforts to reverse the cycle of decline in ocean health and gather ocean stakeholders worldwide behind a common framework that will ensure ocean science can fully support countries in creating improved conditions for sustainable development of the Ocean. The Ocean Decade provides a common framework to ensure that ocean science can fully support countries to achieve the 2030 Agenda for Sustainable Development.

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognise that

ending poverty and other deprivations must go together with strategies that improve health and education, reduce inequality, and spur economic growth all while tackling climate change and working to preserve our oceans and forests. It is timely that we generate the knowledge needed to support a well-functioning, productive, resilient, sustainable, and inspiring ocean. In this way, the Ocean Decade may be considered a tool to help countries not only meet SDG 14 (Life below water), but many of the other SDGs that rely on the ocean.

As educators, how can we do this? Through building greater ocean literacy so the next generations (and current generations) can all have a greater understanding of what we can do (and why we need to) to protect the health of our ocean. It is after all, their future.

Ocean literacy is defined as an understanding of the ocean's influence on you and your influence on the ocean. We need to incorporate more OL in the Australian Curriculum in ALL learning areas. SeaWeek is AAEE's annual marine education and action campaign to focus community awareness, provide information, inspire

educators, and encourage Australians appreciation of the importance of the sea. The principles of Ocean Literacy (an international marine-themed curriculum framework for educators) forms the basis of the key messages that are promoted by SeaWeek. Our goal for 2022 and the future is to increase engagement of SeaWeek by industry, scientists, educators, learners, and the broader community as we engage in the UN Decade of Ocean Science for Sustainable Development. SeaWeek gives us a fantastic opportunity to promote educational issues of relevance to the marine environment.

More Info

To find out more about the Ocean Literacy Principles and how to incorporate them into your classroom:

Global - <http://oceanliteracy.wp2.coexploration.org/ocean-literacy-framework/principle-7-v2/>
@unesco
<https://oceanliteracy.unesco.org/>.

Ocean Literacy in Australasia - <http://australasioceanliteracy.wp2.coexploration.org>.



Sea Week and how Wellington Caves showcases our 400 million year old sea.

By Ian Eddison,
Wellington Caves NSW

At Wellington Caves NSW, 100's of kilometres inland from the coast, a new interpretation zone, 'Ancient Landscapes' incorporates information on the make-up of its limestone from an ancient sea. Caves are often formed in limestone which essentially is a sedimentary rock of marine origin, mainly of crustaceans from the sea.

Most cave tourist sites are in similar marine origin. Wellington Caves is blessed with a significant array of marine fossil examples compared to most cave sites. "It has been said, 'Wellington Caves has the greatest assemblage of Devonian marine fossils in the world.' Therefore it was an important inclusion in our Ancient Landscapes within our new Visitor Experiences Centre," said Michelle Tonkins Wellington Caves Complex Operations Coordinator.

There are four themes incorporated in the Ancient Landscapes: Ancient Seas; Megafauna; Wellington Wiradjuri, and History Revealed. All of these are extremely important and unique aspects of what makes up the Wellington Caves. "In celebration of Sea Week we share this with you so that any time you or your family and friends visit the Central West of NSW, add Wellington Caves to your places to visit," said Michelle. "We worked really hard to give equal footing to these important aspects of our Ancient Landscapes."

The marine story is very important as the caves have long had a marine fossil trail for visitors to walk, along with interpretation of what they are seeing. This is now complemented with the new interactive screen in Ancient Landscapes which brings these creatures to life. It really helps to see what these creatures looked like as fossils are often only seen in part. The Ancient Landscapes marine interactive scene incorporates crinoids, gastropods, tabulate corals, brachiopods, trilobites and nautiloids. Some of the displays incorporate fossils thanks to the Australian Museum who assisted with marine specimens that were originally researched and gathered from the region -- such is the significance of the Wellington Caves Devonian limestone -- in the mid 1800's. Often when



Devonian marine fossils are being researched around the world, it is the type fossil from Wellington Caves which assists in moving back and forward in time periods.

Development during the 2020 pandemic proved to be awkward, but despite the challenges, the Ancient Landscapes was created and installed. The project was completed by a team from Wellington Caves, Dubbo Regional Council and an interpretation specialist Thylacine and their network of teams in Sydney and Canberra who made it all happen. The Ancient Landscapes was so successful it won Judges Choice in the Interpretation

Australia Association awards in 2021.

Educating people on the impact the human race is making on our planet, particularly through the activities of Sea Week, is incredibly important. Wellington Caves show how the natural world is important - from the past though to today, including the cultural and scientific significance of the caves. It is through interpretation that understanding, and therefore appreciation, is gained. From this value by people improved behavioural practices can be adopted and protection of the world we live in can occur – Based on Principles of Interpretation by Freeman Tilden.

Bush Blitz connects students with deep sea science

In July 2021 Bush Blitz partnered with Museums Victoria and Parks Australia aboard the CSIRO’s Investigator research vessel to explore the previously undocumented deep sea around Christmas Island in Australia’s Indian Ocean Territories (IOT).

About Bush Blitz

Bush Blitz is Australia’s largest nature discovery program – a unique partnership between the Department of Agriculture, Water and the Environment, Parks Australia, BHP and Earthwatch Australia to document plants and animals across Australia. Since the program began in 2010, Bush Blitz has discovered more than 1,800 new species and has added thousands of species records to what was already known, increasing scientific knowledge to help us protect our biodiversity for generations to come.

With over 90% of our marine area not yet comprehensively surveyed by scientists, Bush Blitz enthusiastically jumped onboard the RV Investigator.

Deep sea discoveries

The research team was made up of deep-sea marine experts from Australia’s leading scientific institutions.

“These places are amazingly unexplored,” said Dr Tim O’Hara, the voyage’s Chief Scientist and Senior Curator of Marine Invertebrates at Museums Victoria, before the voyage. “There are these huge seamounts that rise kilometres off the sea floor that we haven’t mapped yet...They’re enormous things—some 70 kilometres across—and the only reason we know some of them exist is because ships have run into them...No one has seen these isolated areas before, we have no maps of them and no knowledge of what lives there, and this voyage will provide world-first baseline data of these unknown marine environments and their inhabitants.”

Student and public involvement

It was Bush Blitz’s job to share what the scientists discovered, via live ship-to-shore communications and through social media.

Bush Blitz’s Dr Kate Grarock lived aboard the research vessel and hosted



Tiffany Sih

live crosses to 10 schools in 5 states across Australia and on Christmas Island. Over 350 students from Years 2 to 12 were given the opportunity to talk live with scientists on the ship, and many more students gained access to videos and other resources through an online portal.

Feedback from the teachers involved was overwhelmingly positive. One teacher said “...the kids came away from it with so many questions about life at sea as a scientist and so in wonderment that we are still finding and naming new species. Amazing work.”

Resources and more opportunities

The fascinating interviews made with marine experts during the voyage are still available on the Bush Blitz YouTube channel. On the Bush Blitz website, you’ll also find a fact sheet featuring



10 of the most popular creatures from the social media campaign – from the bioluminescent, parasitic Cookie Cutter shark to the Disney-inspired Dumbo octopus.

Planning is well underway for Phase 2 of the voyage, which will take place in the Cocos (Keeling) Territories during October and November 2022. More information will be available on the Bush Blitz website closer to the voyage. Teachers who would like to register their interest can also email bushblitz@awe.gov.au.



Queensland's first accredited Environmental Education Centre

Numinbah Valley Environmental Education Centre, located in the Gold Coast hinterland has been awarded a 5-star cleaner greener school rating by environmental movement, Keep Queensland Beautiful.

The first ever Environmental Education Centre to receive the accolade.

Cleaner Greener Schools is an environmental sustainability 'accreditation' recognition platform and 'awards' program for education institutions in Queensland.

Accreditation provides an opportunity for schools to be recognised for their clean, green, and sustainable actions through six key focus areas: Litter, Waste, Recycling, Water, Energy and Biodiversity.

"Numinbah Valley Environmental Education Centre is going above and beyond what other Environmental Education centres we've visited are achieving," said David Curtin, chief executive at Keep Queensland Beautiful.

At the unveiling of the recognition signage, David Curtin also spoke about the areas of sustainability (that the centre excelled in) that impressed the judges.

"All staff continue to embed our First Nation's peoples and cultures throughout the centre, with the flags flying proudly alongside signage at the entrance acknowledging the traditional owners of the land, native plantings and bush tucker garden with interpretive signage, and the indigenous artwork adorns the walls of the indoor learning space.

"Their unique solar energy USB charging station in partnership with Substation33 is the first of its kind in Queensland that we've seen, and as it is a portable structure, it can be used for school incursions and outdoor events.

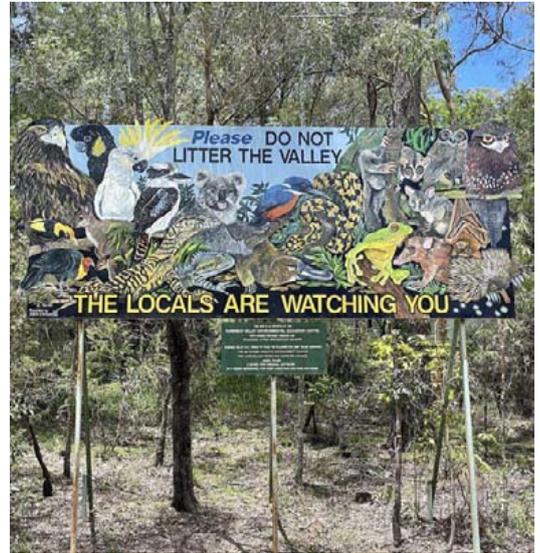
"The entire centre is now powered by solar energy with battery storage, so, the school is basically "off the grid".

"Visiting students from across South East Queensland are engaged in waste reduction on site, learning the benefits of using the three-bin system – with all organic waste being reused on site in the composting system and worm farm. Then used in the gardens to grow fresh produce.

"Nesting boxes can be spotted



(L to R):
Sharyn Yaun,
Ben Kober,
Melissa Traill,
David Curtin,
Kalindi Brennan



Photos
available in
Hi-resolution
upon request:

(L to R):
Melissa
Traill, Ben
Kober, Kalindi
Brennan,
Sharyn Yaun,
Ryan Huth



around the campus, building a natural wildlife corridor in a semi-urban environment.

Numinbah Valley Environmental Education Centre's Principal, Kalindi Brennan was excited to be the first ever Environmental Education Centre awarded a 5-star rating in Queensland.

"We are thrilled to have been recognised for the sustainability practices visible across our site and woven into learning activities and programs for students from Pre-Prep to Year 12.

Students are invited to be environmental champions and custodians of Country while engaging with our programs. We hope that all students leave our centre inspired and

equipped with everyday sustainability skills they can apply to positively impact their own local environment.

"We are also proud of our work in the community with mentors, partners and stakeholders. Our P&C hosts community tree-planting events monthly, as part of regeneration and biodiversity projects to restore natural habitats in Numinbah Valley.

"We are keen to be ambassadors for Keep Queensland Beautiful and support other schools to engage with the cleaner greener schools program."

<https://numinbahvalleyeec.eq.edu.au/>
Follow us on Facebook!
<https://www.facebook.com/NuminbahValleyEEC/>

Connecting through Art



In the September Issue of the *ozEEnews* our Connecting Kids to Country project was introduced to the AAEE membership. The environmental education project is certainly one we are passionate about, and we have received positive support and feedback from the schools involved so far. The end of 2021 saw the completion of a brilliant collaborative mural between all three participating schools.

An initiative of the Connecting Kids to Country Project funded through the State NRM program, this mural is a powerful and creative representation of the environment we live in. The students reflected on what they learnt at each excursion through their experiences and the knowledge from the specialists, moulding this into a creative tile.

The mural is a result of the joint effort between the consulting artist Amanda Bradshaw, and the year 4,5 and 6 students from Cranbrook, Tambellup, and Frankland River Primary Schools. This will be displayed at the Gillamii Centre; however, each school will be able to proudly display their work throughout the year.

Gillamii Project Officer Ashley Marjoram also visited each school before the end of the year to give the students their at-home packs, which contained activities and resources to enable exploration around their own environments at home or around town. As a result of attending the AAEE conference, Ashley has been in contact with Joselyn Juraszek, and is looking forward to collaborating with resources to implement an Adopt a Spot program within each school this year.

Member Spotlight



Julia with award.
Photo: Margaret Saul

Julia Landford

Member since: 2017

NatureArt Lab, Founding Director

Tell us about your program:

Over four years ago I decided that the environment in Australia needed urgent attention. We needed to create a groundswell of interest in nature and its conservation. NatureArt Lab is doing this through delivery of art/science programs including nature journaling, photography courses, immersive nature tours in Australia and internationally, environmental education programs, community artist in residence programs, contributions to conservation campaigns, natural history collection access opportunities, book club events, special interest groups and art initiatives for children. Over the past four years we have established an active and growing team of teaching experts and a community of engaged participants from all walks of life, many of these being women.

NatureArt Lab has recently been recognized for this work receiving the Telstra Best of Business Award for Promoting Sustainability (ACT), as well as State Finalist Awards for Accelerating Women, Championing Health and Building Communities. We are now a National Finalist for Promoting Sustainability, and the winner will be announced in April 2022.

What benefits does your organisation/program provide?

NatureArt Lab's goal is to promote engagement with nature using a combination of creativity and science to enable a better understanding of our environment and the value of biodiversity. Australia has concurrent challenges with climate change and biodiversity loss, along with urbanization and unsustainable consumption of natural resources, land and ecosystem degradation. As an environmental educator we can contribute to people's understanding of the value of our environment, create meaningful ongoing connections and encourage advocacy and support for a more sustainable future.

What most inspires you about your program?

It is inspiring to see the difference that our programs make for people's connections with nature through clearer observation and a better understanding of the environment. Everything from nature journaling through to learning about drawing, watercolour painting, printing and macrophotography provides opportunities for more meaningful engagement with nature.

NatureArt Lab website: www.natureartlab.com.au

Facebook: @natureartlab

Instagram: @natureart_lab

Sustainable Fishing activity for SeaWeek



By Sarah-Jo Lobwein -
SeaWeek Coordinator

From the farm to sea . from the sea to the farm what will you discover in your search about sustainable seafood? Take a dive down under!

Mrs Sue Denholm and the Foundation /Year One Class (2020) at St John's Lutheran School watched the video *A Dive Down Under with George the Farmer* that uncovered exciting facts about the Southern Rock Lobster which live off the South Australian coast, while hearing from a working scientist from the South Australian Research and Development Institute (SARDI). This video was originally created for the DEEP Blue theme of 2020 National Science Week. After watching the video and learning about fishing for Rock Lobster in South Australia, the class created illustrations of the Deep Blue on iPads, and then created a GO FISH activity modelling how to sustainably fish for lobsters - by measuring them to see if they are big enough to keep, to eat!

"We are a rural, farming community and our students LOVE George the

Farmer. Our students know lots about farming practices on the land but not so much about our oceans. Your resource helped us explore the ocean and learn about catching Southern Rock Lobster. We started with your video and discussed what students knew about fishing. We used our iPads (our school has 1-1 devices) to create an ocean picture and share it with our parents using the Seesaw app (platform for sharing schoolwork). We then talked about sustainable fishing and how important it is to keep enough in the ocean for all of us. Students then used improvised fishing rods with magnets to fish for rock lobsters and then used rulers to measure their catch to work out which lobsters they could keep, and which needed to be returned to the ocean.

We are a farming community too and understand how important farming is.

You can learn and model this sustainable fishing activity too, links below!

Activities:

YouTube video: https://www.youtube.com/watch?v=X_rvia4AxJc

The link below to the PDF of the follow up 10 comprehensions questions and the new Go Fish

lobster activity inspired by St John's Lutheran School. This is a free resource provided by George the Farmer. We recommend as a resource for Primary schools:

<https://www.georgethefarmer.com.au/collections/teachers-guides/products/a-dive-down-under-science-week-comprehension-questions>

As an extension activity, you may like to research how we can make lobster fishing even more sustainable, including methods in respecting moulting, breeding and brooding periods, cooking methods that are painless (some practices are banned in some countries based on understanding sentience) and reducing plastic pollution from lobster pots:

<https://www.abc.net.au/news/2022-03-02/lobster-pot-environmental-impact-plastic-free-warrnambool/100871510>

So take a dive and Go Fish ! well should we say Go, Crustacean ???!!!

P.S. Did you know March also hosts Sustainable Seafood Week?

We would love to hear your stories and activities that link learning about the connections between land and sea, or learning about the ocean affects you no matter where you live in Australia - send them in so we can share !

TAS Chapter Update

On December 14th we had a Christmas get together at Chris Haas house with relaxing chatter and views after our final meeting for the year brainstorm. Outcomes included Chris Haas being the Tas nomination for the AuSSA Teacher Recognition Award for all her outstanding work.

Outside The Box for waterSHED education resource received \$500 from AAEE to support the resources around the restoration of Lake Peddar. This will now be delivered in August in the Betts Gallery.

Brainstorming for the Premiers Grant and Youth Wellbeing Scheme of \$50,000 – outcomes proposed included a bus trip to Mt Field NP with complimentary DR and a day in northern suburbs park targeting afghan or other groups.

We have tried to meet several times since but its been tricky with borders opening, workloads etc. The 22nd March will be our first meeting for the year 2022. However members have been suitably busy including:

Pirates against Plastic as part of our Seaweeek activity, Maree Bakker NRET

and Discovery Ranger Brooke Robinson joined forces to run an activity with the Tasman council at Eagle Hawk Neck market on 30th January.

25th February Hobart College Student Environment Leaders and Steiner Home Groups ran a Clean Up Schools Day covering 65 hectares of bushland plus 2 community beaches and a sporting oval – 550 students in action and 50 teachers!

26th February SLC had planned for ECET bush school with Barb Jones who created SA first bush school but this was cancelled due to Covid.

Also excitingly the Container Deposit legislation passed the Upper House which some of our members have been involved in.

Meeting proposed Bett gallery in Feb delayed due to changed location and getting a quorum to Feb. Included guest speaker: Jane Johnston from Travel With a Cause and ran on 22/3/22. We have our AGM set for 5/5/22.

As always, our motto has been to promote understanding and Awareness of environmental education both within schools



and outside, build and strengthen networks, collaborate on projects for stronger outcomes and showcase the expertise our members have.

NSW Chapter Update

By Danielle Blenkhorn

One of our 2022 projects is the delivery of sector specific professional learning about nature connections and nature play for environmental educators. We have partnered with experienced sustainability educators within our AAEE NSW network for online and face-to-face workshops, exploring the benefits, opportunities and challenges of connecting with nature programs.



For early childhood educators, we are working with Fran Hughes from NSW Early Years Nature Connections to deliver a popular practitioner based online workshop. Primary school teachers have the opportunity to take part in a series of workshops over Term 1 & 2, supported by educators from the Centre for Ecological Learning. Local government educators will be focussing on improving professional

practise and networking via the local government educator forum on 31 March 2022.

Through the professional learning series, we are asking educators to share their stories, skills and planning strategies to help us build a collection of useful resources and strengthen connections in the sustainability education community.

ACT Chapter Update

By Viv Pearce,
Convenor

New Executive Team, and a Focus on Water in Term 1

Our AAEE ACT executive in late February/early March to develop better ways to run our group and plan for this year's events. We had hoped to run a face-to-face planning afternoon at Australian National Botanic Gardens (ANBG) but with Covid still circulating we opted instead for online meetings. However, our AAEEACT Autumn Picnic, a relaxed networking gathering, and outdoor event took place, Sunday 27 March on the Eucalyptus lawns Australian National Botanical Gardens.

We are also thinking of our wider AAEE members caught up in the flooding events up North and how our group can support actions in Australia to prevent and adapt to an ever-shortening cycle of floods and bushfires and droughts. We will be promoting ACT Conservation Council (who are partnering with Climate Action Network Australia) to distribute distinctive 'Climate Action Now' signs in the lead up to the federal election. We are also behind AAEE national campaign to have a national approach to EfS in Australian schools. This is a climate emergency!

Water has been the focus in Term 1, with AAEE SeaWeek (5-13th March) and World Water Day on March 22. During March, members from Waterwatch, Jerrabomberra Wetlands, H₂O_K and Icon Water, have combined with Actsmart Schools to provide a series of valuable PLs for ACT educators. Check out Actsmart Water Professional Learning opportunities (PL)

Our colleagues at ACT Landcare has been busy in March, link for activities, with many thousands of individuals and over 70 groups who are dedicated to caring for the natural assets of our bush capital. AAEEACT is continuing to forge a closer relationship with our local Landcare groups. On March 10, myself, and Julia Landford (AAEEACT VP) had the pleasure to attend ACT Landcare Awards. Julia helped judge the Photography Awards and myself the Junior Landcare Team Award. I was pleased to see North Ainslie Primary School and Parents & Citizens Association win this award, very worthy recipients with strong community connections. (See photo above)

Ever wondered what Planetary



Award winning Junior Landcare Team, students, teachers, parents from North Ainslie P.S

Twilight Tour at Mulligans Flat Woodlands Experiment



Boundaries was all about? Here in the ACT, we are strong proponents of the usefulness of this concept in EfS.

I must also congratulate NatureArt Lab and its Director Julia Landford on receiving the Telstra Best of Business Award for Promoting Sustainability (ACT), as well as State Finalist Awards for Accelerating Women, Championing Health, and Building Communities. Here's hoping NatureArt Lab wins the national Promoting Sustainability Award in April.

NatureArt Lab has also been active this term in the biodiversity area with a great Australasia Bat Night talk fundraiser to support flying fox wildlife rescue. I am looking forward to the NatureArt Lab Mycology Special Interest Group workshop on Monday 28 March. Julia has also been busy organising tours for nature journalists and photographers to the South coast Murrumbidgee National Park in March and a Tasmanian trip for fungi lovers in April.

"And something wild is coming in April" or that's what our new Executive member Andrew O'Meara from the *Woodlands and Wetlands Trust* tells us...

Wildbark Learning Centre, opening soon, is a gateway through time, allowing us to enter from the quiet suburb of Forde and exit into a near pre-European bushland known as Goorooyarroo Nature reserve, a part

of the Mulligans Flat Woodland Experiment. ACT community, educators and students will be able to participate in industry leading workshops, award winning nature tours, listen to dreamtime stories from Nggunawal knowledge holders and check out the very cute captive bred Eastern Bettong (they look like mini kangaroos, great diggers, their disappearance locally was a great loss to our local ecosystems), who are some of the 'disappeared' animals repopulating the enclosed woodlands. There will be something for all ages to learn and connect with Country with story-time sessions and a nature play garden.

Wildbark, is the culmination of a joint venture between *The Woodlands and Wetlands Trust* and the Odonata Foundation, along with partnerships with the ACT Government and Australian National University. These partnerships allow for effective land management, world class academics and science communication to be brought together in one place, with the ultimate outcome to dispel the overwhelming fear of climate anxiety and replace it with a science backed hope for a better future.

AAEEACT will be continued the spotlight on biodiversity and threatened species in Term 2

QLD Chapter Update

By Dr Lisa Ryan

It's been a crazy start of the school year, although in this day and age, crazy seems to be the new norm. Finally borders opened up, omicron surged, and the dangerous effects of climate change were made ever more present and obvious with a couple of weeks of deadly storms and catastrophic 'unprecedented' rain events sweeping across the southeast Queensland coast down into New South Wales. Our hearts go out to the communities affected, especially communities who lost lives, schools, small businesses and other important community infrastructure.

Across the state, our regional branches have busy planning events and delivering projects. In Brisbane, the Nature Play Passport is back bringing another round of epic nature-based missions, in more locations across the Brisbane Local Government Area.

The Sunshine Coast branch is partnering up again with Sunshine Coast Council's Kids in Action Program to plan our 2022 event on the theme of *Catchment Connections: Mountains to the Sea*. This will look at the movement

pathways and journeys that flow across the landscape catchments of Kabi Kabi and Jinibara Countries. A professional development opportunity will be planned as part of the program. Registrations are open now for interested schools and volunteers, with an amazing Environmental Projects Day being planned for May 6.

The Tropical Branch met late Feb for a group watching of the *Regenerating Australia* film by Damon Gateau and an introduction to the Cool Australia ACARA-mapped teaching resource. These education materials responding to the challenge of climate education look super useful for classroom teachers. The branch is also planning a Cairns climate change education event so stay tuned to the AAEEQld facebook page for details.

The Darling Downs branch will be holding their annual Earth Day Environmental Education Expo on Thursday 21st April 2022 at University of Southern Queensland (Toowoomba Campus). The keynote speaker is Prof Hugh Possingham, Qld Chief Scientist.

Check the AAEEQld facebook for further details.

Other Queensland Upcoming EE Activities/Events

Brisbane:

Nature Play Program: Grab your passports from one of the BCC Environment Centres or order one online <https://natureplayqld.org.au/passport/order-your-passports>.

Sunshine Coast:

Kids in Action 2022 Program: now open <https://www.sunshinecoast.qld.gov.au/Environment/Education-Resources-and-Events/Kids-in-Action-Program/Kids-in-Action>

Orchestra of Extinction, Art/Science project, 3-16 April, Tanawah. <https://events.sunshinecoast.qld.gov.au/event/15322220-a/orchestra-of-extinction>

Tiny Giants: Creativity meets entomological research, 5-18 April, Maleny <https://events.sunshinecoast.qld.gov.au/event/15126473-a/tiny-giants>

VIC Chapter Update

By Jo Connor,

EO

EEV have been working on partnerships with local councils and service providers to develop a competition for ResourceSmart Schools in our regions with a prize pool of over \$10,000. Find out more about the competition here: <https://www.eev.vic.edu.au/resourcesmart-competition-1>

We have also recently released a video of interviews with professionals sharing their sustainability career journeys. It can be viewed here:

<https://www.eev.vic.edu.au/careers-in-sustainability-and-environment>

We worked with Odonata to help them engage schools as part of the Great Australian Platypus Search, and we ran a poetry competition, which included incursions with Australian Poet, Lorraine Marwood. You can read the winning poems here: <https://www.eev.vic.edu.au/platypus-poetry-winners> We are continuing with our Ross Trust funded BioEd program to support

new VCE Environmental Science teachers, and have developed a calendar of professional learning for VCE Environmental Science teachers: <https://www.eev.vic.edu.au>

Our monthly VCE Environmental Science member networking sessions have recommenced. These provide an opportunity for members who are VCE teachers to share resources, support each other and share their needs with us so we can continue to support them.

SA Chapter Update

By Naomi Findlay,

SA Convenor

Despite the wet weather, 16 educators attended professional development at the Urrbrae Wetlands hosted by Vanessa Greenslade with raincoats provided! After learning about the importance of an urban wetland environment we set off on a walking tour led by Vanessa to investigate water management techniques, including trash packs to catch rubbish. We were able to see the birds with their eggs high up in nest boxes in the trees thanks to a special pole camera and screen. David Larritt provided information on relevant Indigenous plant species. Great fun was had by all!

I am very pleased to announce AAEE SA's very own Bringing Back the Butterflies (BBB) won a "Service to the Community Award" at the City of Port Adelaide Enfield Australia Day Awards night. We'd like to take a moment to recognise the hard work of Deidre Knight, Steve Fuller and Debra Bradley in creating community and school butterfly gardens. BBB education experts have been sharing propagating workshops with community members in Windsor Gardens!

It's been a busy year so far, with the recent SA election, we have been



lobbying local politicians to take action on the climate crisis and will continue to do so. Leilani Arens has initiated a new page of climate change resources on our website with Global Schools Climate Strike and Earth Hour for Schools coming up on 25/3. You can check it out here: <https://www.aaeesa.org.au/climate-change-resources-for-schools/>

Now we are looking forward to our first members' event for 2022 to be held at Parra Wirra Conservation Park on 2/4.



WA Chapter Update

By Vicky Hartill,

AAEE WA Chapter

A Win for Waste in WA

Early Years Cloth Nappy Trial

Little Greens Steps WA has hit the ground running this year with a successful Waste Authority Waste Sorted Grant implementing a *Cloth Nappy Trial* in early years. The underway project sees a collaboration with The Nappy Guru to deliver early years centre audits; interactive workshops for early years educators and parents; a 'cloth nappies in childcare guide' and a washing service.

In workshops, participants are exploring issues of disposable waste, the benefits and use of modern cloth nappies and shared systems to break down barriers to make it work in all early year's services. The audits have

ascertained the issue is not just the nappies, but the associated waste namely gloves, paper towel and wipes.

Cockburn Family Day Care Services and Wind in the Willows Early Years Centre in Bassendean are ground zero for the project, trialling cloth nappies at home care services and in their baby room, respectively.

Supported Systems nappy waste behaviour change is happening right now, with family day care educators reinventing their washing systems and Wind in the Willows is refining their centre systems to use cloth wipes, less paper towel and improving storage and general bin processes. This service is also trialling a nappy washing service, a first in WA, supported by a hospital linen service.

April hosts nappy immersion month for centres, followed by a project review.

For more information contact the Little Green Steps WA Manager lgs@aaeewa.org.au. Don't forget to check out the Resource of the Month – Cloth Nappies in Childcare Guide!

AAEE WA Finalist in Waste Authority Waste Sorted Awards 2022

The epic achievement to reduce waste and raise the benchmark for waste management at AAEE conferences nationally has been recognised by the Waste Authority's Waste Sorted Awards, naming AAEE WA a finalist in Category 10: Waste Avoidance (Events) Award.

The conference committee made avoidance a number one priority at the recent AAEE 2021 Biennial Conference in September, implementing a detailed waste management plan. A presentation to the judging panel is on the calendar, followed by the gala awards evening at the Ritz Carlton on 19 May. Minimisation of waste is the reward, however a category win won't go uncelebrated. Good luck to our conference committee!

Inspiring Young Oceans Warriors in SeaWeek 2022

Have you ever been swimming and glimpsed a dorsal fin on the horizon? Does the thought of a great white shark lurking nearby give you a cold chill? For most, just hearing the classic soundtrack to Jaws is enough to put you on edge.

But can you imagine for a moment making friends with a great white? What if it was the last one left in the ocean?

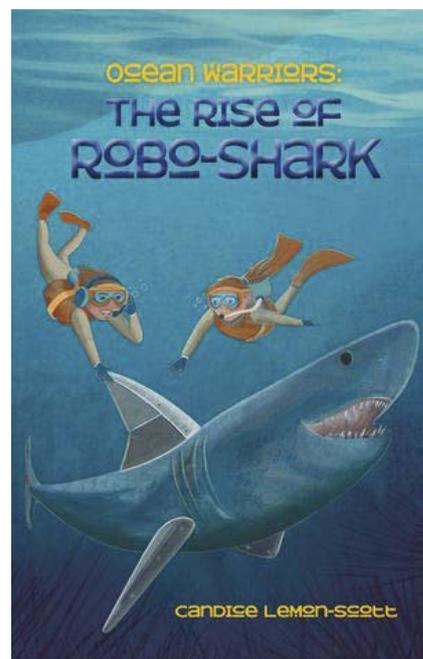
A new children's fiction novel (released to coincide with both SeaWeek and Sustainable Seafood Week) asks us to reconsider the notorious hunter and appreciate its vital value as an apex predator in the increasingly precarious ocean food chain.

Ocean Warriors: The Rise of Robo-Shark puts children at the heart of environmental action and solutions. Suitable for ages 7 – 12 and the first book in a series, it is set in a futuristic world where all the ocean's fish have either been overfished or become

extinct (except for the crown of thorns starfish) when the great white is carelessly removed for the benefit of humanity.

Lemon-Scott's book restores not only the great white shark, but our faith in humanity's ability to make real change to avert the impending crisis. It's an uplifting tale of hope, with lots of laugh out loud scenes and a very creative use of technology and characters, including a bum-breathing turtle.

Early reviewers agree. "*Ocean Warriors: The Rise of Robo-Shark* is a slippery-paced futuristic tale with a commanding conservational twist.... Lemon-Scott's penchant for infusing action-thrills-and-spills-adventure with serious ecological concerns and dressing them all with humour, quirky characters and moments of sabotage and betrayal makes *The Rise of Robo-Shark* compelling reading for middle



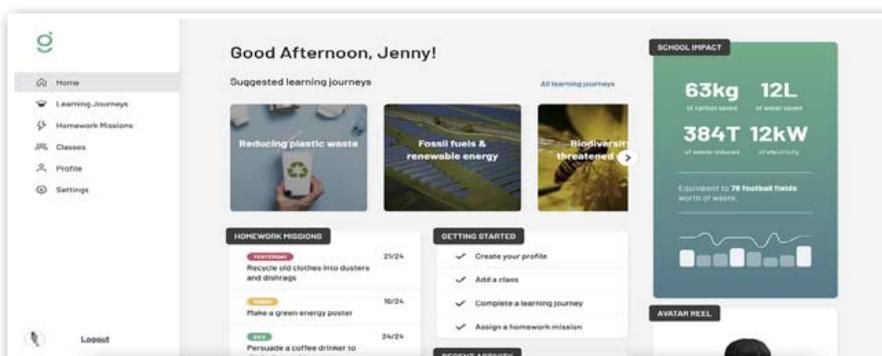
primary schoolers. Snappy chapter titles and rapid scene changes ensure non-stop page turning," writes Dimity Powell of Kids Book Review.

GENUS New EfS Tool for Teachers

Genus is a new concept in teaching sustainability. It provides teachers with quick and easy ways to integrate sustainability into Key Learning Areas. Curriculum-aligned sustainability lessons, created for teachers, by teachers, can be downloaded at the click of a button. Teachers can select entire learning journeys, spanning several lessons, or pick single elements of the journey to support existing activities.

Genus will bring other sustainable businesses with them too - they are already working with Clean Up Australia, and are lining up partnerships with other well-known brands in the space.

The real point of difference, however, lies in the impact the program generates. Classroom activities and homework 'missions' are designed to create meaningful (and measurable) positive impact for the environment. Classroom learning is reinforced with real-world, behaviour-changing tasks. In turn, these practical real-world



experiences will support classroom learning. Impact is recorded at the click of a button and can be reported at the student, class or school level - real-time quantitative data on environmental savings is generated.

You no longer have to worry about teaching sustainability. You don't need to choose between Key Learning Areas and saving the planet - now you can do both at the same time. With Genus, you can generate positive environmental impact, report it to your school and community, meet your Learning Outcomes, and give your students highly relevant, very engaging lessons... all at the same time.

The platform is free to all Australian schools. There is a subscription fee for at-home consumers that want to make sustainability a way of life, but they are

not charging schools.

Genus is currently looking for teachers to trial the platform in classrooms, ahead of launching in May. A very simple trial, which involves using the teaching resources and testing the system.

They are also very interested in generating content for their website - teacher experiences, interviews, case studies, articles you have written or want to write. Topics can include teaching and schools, sustainability and teaching sustainability, child development, climate anxiety, or any other topic related to teaching young people the value of living sustainably.

Please reach out to Jon Owen (co-founder) if interested in any of the opportunities above:

email: jon@genus.earth
m: 0414 692 185
www.genus.earth

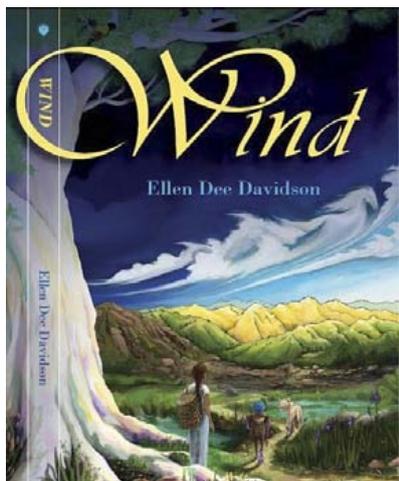
REVIEWS

WIND

By Ellen Dee Davidson
Luminare Press (182 pp.)
ISBN: 978-1-64388-718-0

Kirkus Reviews

This middle-grade adventure sees a girl take up a fantastic quest alongside an alien companion. One day, sixth grader Katie Noriega stares outside during class. She notices an oak tree and hears a voice ask, "Will you listen to me?" She does and learns that the tree doesn't want its branches cut. When she passes this on to Mr. Pinski, her teacher, the class ridicules her. Her best friend, Amy Scott, tells her that pretending to talk to nature is embarrassing. Even more discouraging, Katie's parents have been fighting and may get divorced. After school, her cat, Sasha, says, "Earth." Katie is unsure of the message—until the ground shakes and she falls into the family's basement. There, she meets Za, a young gnomelike alien from the planet Stella. He has purple skin and a bright orb that reveals they're actually in a cave. They follow a stream through this place that's "stuck between" and encounter a woman



named Dania, who leads them to her forest dwelling. Za's guardian arrives and gives them gifts, a charm bracelet and a journey song, to help the kids in their search for the Winged Ones and a way back to their respective worlds. Meanwhile, a battle with the all-consuming Poison One lurks ahead. Davidson shares her passion for fantasy and the environment in this vibrant novel. Katie's character is grounded by the threat of her parents' divorce. She also bonds, despite the bickering,

with Za, whose parents live on different planets. Younger readers will recognize familiar fantasy components, including Kira, a lion; elemental dragons; and Seidon, the lord of the waterways. Love for nature shines as the author's overarching message; for example, Seidon says, "Although I continue to sense the other waters... Many are now polluted, and I can't reach them." An excellent scene showing the connection between trees and fungi gives adventure fans a topic for further study. Also noteworthy is that Katie and Za could not look more different, but they win by embracing their similarities. A winged horse named Wind stays with Katie in the end, hinting at further escapades. A bright, vividly told tale that will bring readers closer to the natural world." — Kirkus Reviews

If you would like an advanced copy of this soon to be released book please contact admin@aaee.org.au

Be a Reviewer

If you'd like to offer your perspective on an available book, add your name to our list of contributors by emailing ozenews@aaee.org.au.

Cities and Marine Plastic Pollution

E-learning course on Cities and Marine Plastic Pollution launched on World Ocean Day

Register now to learn more about plastic pollution and approaches to measuring and managing marine litter from land-based sources, especially in cities. The course is free and self-paced and targets decision makers and practitioners in Asia and the Pacific to better understand the plastic pollution challenge and solutions in the region.

E-learning course on Cities and Marine Plastic Pollution launched on World Ocean Day | Coordinating Body on the Seas of East Asia (COBSEA) (unep.org)

Let's Eat Weeds! a kids' guide to foraging

By Annie Raser-Rowland & Adam Grubb (illus. Evie Barrow)

Review by Cora Roberts

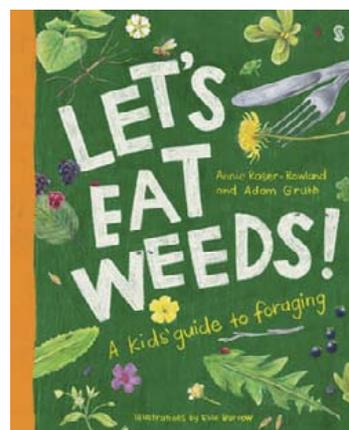
Scribble

From salads to main dishes, edible weeds are delicious! Find out how to identify them, where and when to find them, and how to cook them.

Ever thought weeds were just pesky plants to pull out and throw away? Think again! This informative, funny, and beautiful book will show you just how great edible weeds can taste. Learn to smell your way to an angled onion, bake weeds 'n' cheese pie, and safely harvest the juicy fruits of a prickly pear.

This is the ultimate companion for the young urban or rural forager. Once you've read it, you'll start to see food all around you, every time you go for a walk.

Annie Raser-Rowland is a horticulturalist and writer. She works



at CERES nursery in Melbourne, giving people advice on how to grow lots of tomatoes.

Adam Grubb runs an urban permaculture design and education business, and also co-founded EnergyBulletin.net (now Resilience.org) and the PermaBlitz movement.

Evie Barrow is an artist and illustrator passionate about artful picture books for both kids and adults. Her hand-drawn style celebrates the textures and imperfections made by hand.

Upcoming Events April – June 2022

April

Australian Heritage Festival (April 1 – May 31)
World Heritage Day (April 18)
Earth Day (April 22)
World Malaria Day (April 25)
World Penguin Day (April 25)

May

International Composting Awareness Week (May 1-7)
OzWater'22 (May 10-12)
Hairy Nosed Day (May 11)
World Migratory Bird Day (May 14, October 8)
National Volunteer Week (TBC)
World Bee Day (May 20)
International Day for Biological Diversity (May 22)
World Turtle Day (May 23)

June

World Environment Day (June 5)
International Day for the Fight against Illegal, Unreported and Unregulated Fishing (June 5)
World Food Safety Day (June 7)
World Oceans Day (June 8)
World Day to Combat Desertification and Drought (June 17)
Sustainable Gastronomy Day (June 18)
Whole Grain Week (TBC)

Years and Decades:

UN Decade of Ocean Science for Sustainable Development 2021 to 2030
UN International Year of Artisanal Fisheries and Aquaculture

Events are updated to our Facebook site and website regularly.

Environmental Events Nationally – go to <https://www.environment.gov.au/about-us/media-centre/events>

Learning Circle Forum Recordings

Catch up on our recent Learning Circle interactive video forums and join the conversation.

Login at www.aeee.org.au then go to the Members Area.



Membership renewals

AAEE membership has changed to 'renew on the date of joining'. Please encourage your colleagues and friends to join for our fabulous AAEE member benefits. Join online at: www.aeee.org.au/get-involved/become-a-member/



Waste 2022 Conference

Registrations are now open for the Waste 2022 Conference which will take place in Coffs Harbour from the 3-5 May. Well regarded as the industry's leading waste management event, we are proud to offer AAEE members with a 10% discounted registration rate. Simply go to www.coffswasteconference.com.au and select that you are a AAEE member when registering.

The conference program features leading national and international presenters and is designed with all delegates in mind. It is a 3 streamed program allowing delegates to tailor their learning to their specific needs. There are also 3 social events for onsite delegates providing ample networking opportunities plus an extensive indoor and outdoor exhibition area.

New to Waste 2022 is an Equipment and Technology Expo which will take place on Tuesday 3rd May. During this Expo, you will be able to see the equipment in action and hear presentations from the suppliers about the latest advancements in the waste industry.

For delegates who are unable to make it to Coffs Harbour, registration is also available for our Live Broadcasts where you can watch all of the conference presentations without leaving your desk!

For further information visit www.coffswasteconference.com.au or phone 02 6583 8118.

ozEEnews

Have your story heard

Do you have a story or program you'd like to share with members? If you're an AAEE member we invite you to contribute to *ozEEnews*, our quarterly member newsletter.

Email your story to the Editor prior to the submission deadline for consideration.

Next submission deadline:

1 June 2022

Email: ozeenews@aeee.org.au

Your AAEE: National Executive Council

The National Executive Council is represented by 8 States and Territories.

The Executive is drawn from at least four Chapters/Branches and has working groups to progress key areas of the association which are listed next to each Council Member. The Executive Team is supported by the Liaison Committee to share and update everyone about the Chapters/Branches achievements. Each Chapter/Branch has a nominated person and the contacts are listed below the Executive Council team. We welcome new members and executive team following the 2021 AGM.

EXECUTIVE TEAM

PRESIDENT, Dr Jennifer Pearson WA

VICE PRESIDENT, Sarah-Jo Lobwein NSW

VICE PRESIDENT, Cam Mackenzie QLD

VICE PRESIDENT, Marianne Logan NSW

SECRETARY, Katie Norman QLD

TREASURER, Dr Peter Anderson NSW

COMMITTEE MEMBERS

Dr Sue Elliot, NSW

Jodie Green, ACT

Angela Colliver, SA

Vivienne Pearce, ACT

David Larritt, SA

Stephen Fuller, SA

LIAISON COMMITTEE MEMBERS

ACT Taz Whan

NSW Carly Hood

NT Graeme Sawyer

QLD Katie Norman

SA Jo Hendrikx

TAS Dr Kim Beasy

VIC Jo Connor

WA Vicky Hartill

CHAPTER CONVENORS

ACT Vivienne Pearce

NSW Sue Martin

NT Graeme Sawyer

QLD Natalie Costanzo

SA Naomi Findlay

TAS Ingrid Albion

VIC Dhanish Semar

WA Dr Jennifer Pearson