

Learning Beyond the Classroom

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This Newsletter has been brought to you by staff from:

- Amaroo EEC
- Camp Fairbairn OEC
- Kinchant OEC
- North Keppel EEC

Nogoa River Catchment Trip 2013

From 20th to 24th of May a group of Year 10 students from Emerald State High and Marist College embarked on a journey that would see them cover 40km in a canoe and do many water samples and tests.



The children assembled on Monday the 20th of May at Camp Fairbairn Outdoor Education Centre where they were introduced to Bernie Claussen, a Scientist with a back ground in Resource Management, and Troy Jenkins, an Outdoor Education Teacher at Camp Fairbairn. Students were briefed on the types of tests they would be doing over the week and the challenges they would face when living and working in the outdoors.



They departed Camp Fairbairn around lunch time Monday morning and travelled to the base camp located on the north western side of Lake Maraboon. There the students set up a campsite, started testing samples and familiarising themselves with water testing processes.

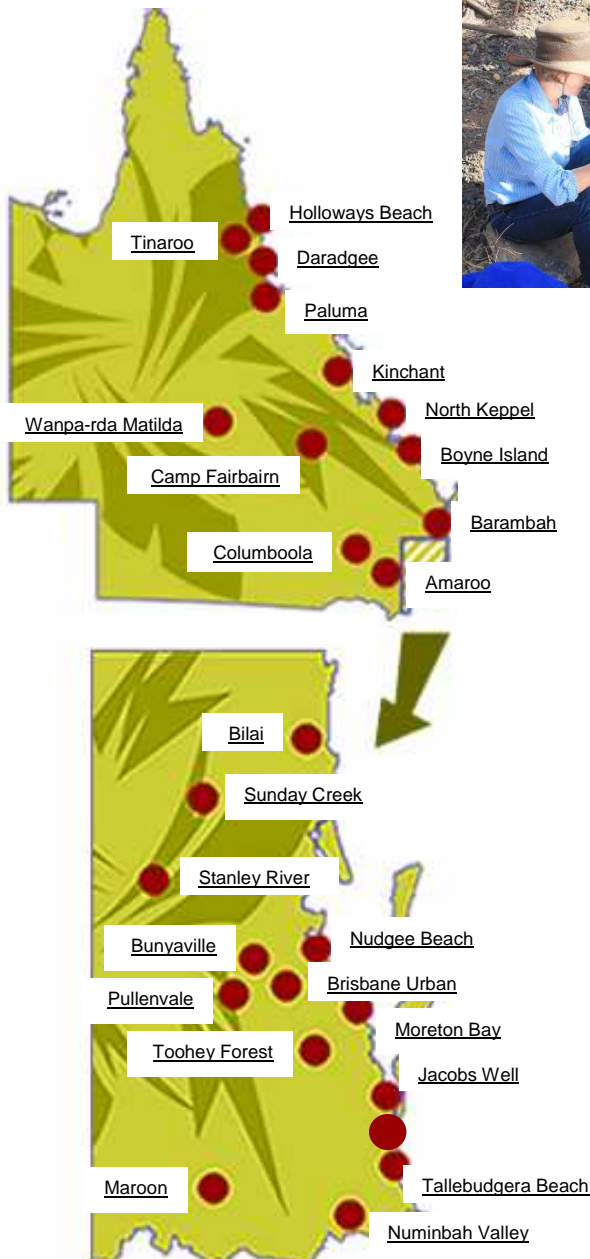
From base camp on day two the students travelled in canoe up the Nogoa and Borilla inlets to take water samples and assess the health of the river and catchment area. Students paddled a total of 18km on day two and were surprised by their stamina and resilience. Once back at base camp, students tested the samples for PH, salinity, and turbidity. All of the data was recorded and evaluated by the students.

Day three and four saw the students travel by vehicle and canoe to where the Nogoa River enters the dam to take samples. Students assessed the banks of the river and looked for signs of erosion. They studied and recorded the different types of plants and a grass that lined the river bank and performed transects to provide accurate counts on different plant species. All of this data provided the students with a report card on the health of the river.

Once back at Camp Fairbairn the students pieced together a presentation based on the data gathered over the four days out in the field. The presentation provided stakeholders with a snapshot of the health of the catchment from the top of the river on the edge of the Carnarvon Range all the way through to the dam wall and the water that is released into the river towards Emerald. Students presented the data collected to principals, parents, BMA representatives, Fitzroy Basin Officials, and land holders.

The project was seen as being a very successful venture between mining companies, schools, and government organisations. All of which are very keen to support the project in 2014.

Article contributed by: **Troy Jenkins,**
Teacher, Camp Fairbairn OEC





Birds, Birds and More Birds

Queensland Outdoor & Environmental Education Centre Sector

Chairman: Allan Rafton

PO Box 909
Elanora QLD 4221

Phone: 07 5520 9300

Fax: 07 5520 9325

E-mail: araft2@eq.edu.au

<http://education.qld.gov.au/schools/outdoor/>

The North Keppel Island Environmental Education Centre (NKIEEC) feels a real obligation to have minimal impact on the environment at North Keppel Island. As the only occupant within an island National Park it is a very privileged position but does bring real accountabilities. Are we managing our site in a sustainable manner?

In an effort to monitor the long term impact from our occupation, the Centre hosted BirdLife Capricornia who conducted a census of the Island's bird population. There have previously been 3 documented censuses completed and it was thought some comparative data may help to make some judgements about the impact of the Centre.

Questions and Answers from BirdLife Capricornia

Were your findings consistent with other coastal locations?

Yes, the birds on North Keppel Island were similar to that on Great Keppel Island and other coastal locations.

From the previous data, were there any significant changes to the density and species of birds on North Keppel Island?

As you can see from the historical records in the list (see page 3) it would appear that species like boobies and gannets used to visit the island more often than at present. This is probably due to the huge increase in levels of human activity around the inshore islands. These species are still present in good numbers on the offshore islands.

Why was the Black Falcon so significant on North Keppel Island?

The Black Falcon is a rare species that is very nomadic with a large range. We do not see many of them which is why the sighting was so special.

Is there anything that we may be doing which is detrimental to the bird population at North Keppel Island?

I do not think that you are doing anything detrimental to the bird population and the large areas of undisturbed bush on the island will ensure that bird species should be maintained for the future, unlike Great Keppel Island.



"Thank you for having us on North Keppel Island. We had the most enjoyable time there and many thanks to all of your staff for making us so welcome. I have compiled some results from our bird survey as well as those historical bird lists from the Cruden family and the BOC visit. We have also found a bird list compiled by members of the RAOU who visited the island in 1924. A combined list from all of these sources provides a total of 87 species that have been seen. I hope that this will help with the environmental studies of the students who attend the island. Hopefully we can visit again next year in a different month to conduct another survey."

Allan Briggs- BirdLife Capricornia

NKIEEC staff found the experience of working with BirdLife Capricornia educational, engaging, informative and thoroughly enjoyable. The notion of a "moving base line" in much environmental discussion can be avoided with good quality long term data. We believe the development of local resources for students ensures the scientific process becomes "real" or contextualised for students and additionally contributes to quality decision making in the quest for a sustainable future.

Article contributed by:

Roger Searl,

Principal, North Keppel Island EEC

Notes

1. The Royal Australian Ornithological Union was established in 1901 to promote the study and conservation of the native bird species of Australia. In 1996 it adopted the trading name of Birds Australia for most purposes although it retained its original name for legal reasons. Birds Australia merged with Bird Observation and Conservation Australia in 2012 to form BirdLife Australia.
2. BirdLife Capricornia is a branch of the national BirdLife Australia organisation. A group of 22 members of BirdLife Capricornia visited North Keppel Island on 23rd and 24th March 2013 to conduct an Island wide bird survey.
3. Evelyn Cruden and her family visited North Keppel Island in August of 1977 and 1978 and compiled two bird lists for the first Atlas of Australian Birds. It is assumed from this that Evelyn Cruden was a member of the Royal Australian Ornithological Union which subsequently became Birds Australia.
4. The Bird Observers Club was established in 1905 as a breakaway group from the RAOU and had their head office at Nunawading, Victoria. A group from the BOC visited NKI in 1976 but it is not known who they were or which branch they came from. The club eventually attracted so many members from other states that there was an appeal to become an Australia-wide organisation, and the name "Bird Observers Club of Australia" was adopted in 1991.
5. Bird Observers Club of Australia (BOCA) coordinated the largest program of bird walks, camps, coach trips and extended tours in Australia and had 49 branches Australia wide. A name change from the Bird Observers Club of Australia to Bird Observation and Conservation Australia was made to reflect more accurately the aims of the organisation.
6. In 2012, Birds Australia and BOCA merged to form the new BirdLife Australia organisation which is now the pre-eminent national ornithological group.

Left: One of 3768 shots taken with a motion activated camera left in the nest of this Osprey.

Results from 4 Bird Censuses on North Keppel Island

Species	BirdLife Capricornia 2013	Evelyn Cruden 1977/78	Bird Observers Club 1976	RAOU Campout 1924	Centre Staff
Australasian Pipit	0	1	1	0	
Australian Gannet	0	1	1	0	
Australian Pelican	0	1	0	0	
Bar Shouldered Dove	1	1	1	1	
Barn Owl	0	0	0	0	1
Beach Stone-Curlew	1	1	0	0	
Black Falcon	1	0	0	0	
Black-faced Cuckoo Shrike	0	1	0	0	
Black-faced Monarch	0	0	1	0	
Brahminy Kite	1	1	1	0	
Brown Booby	0	1	1	0	
Brown Falcon	0	0	0	1	
Brown Goshawk	0	0	0	1	
Brown Honeyeater	1	1	0	0	
Brown Quail	1	0	0	1	
Bush Stone-Curlew	1	1	1	1	
Caspian Tern	1	0	0	0	
Channel Billed Cuckoo	1	0	0	0	
Collared Kingfisher	1	0	0	0	
Common Koel	1	0	0	0	
Common Sandpiper	0	1	0	0	
Crested Tern	1	1	1	1	
Darter	0	0	1	0	
Dollarbird	1	0	1	0	
Eastern Reef Egret	1	1	1	1	
Fan-tailed Cuckoo	0	1	1	0	
Far-eastern Curlew	0	0	0	1	
Figbird	1	0	0	0	
Forest Kingfisher	0	1	1	1	
Grey Fantail	0	1	0	0	
Grey Shrike Thrush	0	0	1	0	
Grey-tailed Tattler	1	1	1	0	
Horsfields Bronze Cuckoo	0	0	1	0	
Laughing Kookaburra	1	1	1	0	
Leaden Flycatcher	1	1	1	0	
Lesser Crested Tern	1	1	0	0	
Lewin's Honeyeater	1	0	0	0	
Little Black Cormorant	0	1	0	0	
Little Pied Cormorant	0	1	0	0	
Maggie Lark	0	0	1	0	
Mangrove Honeyeater	1	1	0	0	
Masked Booby	0	1	1	0	
Masked Lapwing	1	0	0	0	
Nankeen Kestrel	1	1	1	0	
Noisy Friarbird	1	1	0	1	
Olive-backed Oriole	0	1	1	0	
Olive-backed Sunbird	0	1	0	0	
Osprey	1	1	1	1	
Pallid Cuckoo	0	0	1	0	
Peaceful Dove	0	1	0	0	
Pheasant Coucal	1	1	1	1	
Pied Cormorant	1	1	1	1	
Pied Oystercatcher	1	1	1	1	
Rainbow Bee-Eater	1	1	1	1	
Rainbow Lorikeet	0	1	0	0	
Rose-crowned Fruit Dove	0	0	1	0	
Rufous Fantail	0	0	1	0	
Rufous Whistler	1	1	1	0	
Sacred Kingfisher	1	1	1	0	
Satin Flycatcher	0	1	1	0	
Scaly-breasted Lorikeet	0	1	0	0	
Shining Bronze Cuckoo	0	1	0	0	
Silver Gull	1	1	1	1	
Silvereye	0	1	0	0	
Singing Bushlark	0	1	0	0	
Sooty Oystercatcher	1	1	1	0	
Southern Boobook	1	0	0	1	
Spangled Drongo	1	1	1	0	
Spectacled Monarch	0	0	1	0	
Straw-necked Ibis	0	1	1	0	
Striated Heron	0	0	0	1	
Torresian Crow	1	1	1	1	
Tree Martin	1	0	0	0	
Varied Honeyeater	0	0	0	1	
Varied Triller	1	0	0	0	
Welcome Swallow	1	1	1	0	
Whimbrel	1	0	1	0	
Whistling Kite	0	0	0	0	
White-faced Heron	1	1	1	1	
White-bellied Cuckoo Shrike	0	1	0	0	
White-bellied Sea Eagle	1	1	1	1	
White-eared Monarch	0	0	1	0	
White-throated Greygone	0	1	1	0	
Willie Wagtail	0	1	0	0	
Zebra Finch	0	0	0	1	
Totals	42	53	78	23	1

Total number of species for North Keppel Island from all sources = 87

Our Aim: Zero Food Waste to Landfill

Kinchant Outdoor Education Centre (KOEC) is working towards '0' (zero) food waste leaving the site as landfill and is actively waste streaming so that all recyclables are captured and recycled through the Mackay Regional Council bin system. It has implemented four practices to achieve this goal as well as having an ongoing battery drive to fundraise to improve facilities. The battery drive started in Term 1, 2013 and we are still slowly filling the first pod.

Practices we follow at Kinchant Outdoor Education Centre to reduce the amount of Waste going to Landfill:

1. The first stream, is that food left over from meals goes to Donna's chooks. Donna is a highly valued cleaner who has been a long term employee of the centre and has always taken the food scraps home. But obviously, chooks should not be given chicken products.
2. So earlier this year Principal Ray Young, purchased a bokashi bucket (second stream) to deal with the fried eggs and shells from breakfast, sliced chicken meat from lunch and crumbed chicken from evening meals. The process was easy to follow. It was basically layering the chicken products with fermented grains (EM bokashi purchased in a 5.0lt bag). The contents were then pressed down to remove air between each layer. A plastic bag was used for this. The lid was put on tightly between each use, to create the ideal conditions for the anaerobic fermentation process to take place.

The process was repeated until the bin was full. After a final layer of fermented grain, the bin was tightly sealed and left to sit for two weeks over the Easter break. On inspection, the smell was yeasty and a white fluffy fungi was present on the top. The contents looked like pickled chicken. The juice was drained off, diluted and used on Ray's Patch as a soil conditioner. It is also acceptable to put down the sink. The contents of the bokashi bucket were layered into the compost bin so that the final breaking down would occur.

At KOEC, the bucket is being filled again and depending on camp sizes, a second bucket may be purchased, but it is not needed as yet.

3. The third stream is having a worm scrap bucket in the kitchen. The five camp cooks have been in-serviced on suitable scraps to put into the bucket. The four worm farms are fed after breakfast on the second day of a camp with student volunteers. Schools have the option of taking a bottle of worm juice home at the end of their camp. KOEC labels are being made for the worm juice bottles with instructions for use. Bunnings Mackay donated the farms, worms and 'The Big Worm'.



Left: "The Big Worm" and worm farms assist in reducing the waste leaving the Centre.

Right: "Do the Right Thing, Use the Right Bin"

Below: Fundraising Battery Drive



4. The last practice is a 'Food Rescue' box. It is run along the same lines as 'Oz Harvest' and packaged food from school day trips destined for the waste bin is collected and delivered to a local youth shelter on a weekly basis. This practice has only been implemented in Term 2, 2013 so it's too early to judge its success. So far, not a lot of packaged food has been placed in the box.



Other Strategies

- A permanent 'Waste Streaming Effort' sign placed next to the 'Big Worm' is nearly operational. Visiting groups will have feedback from Donna on whether they need to 'try harder' or they are 'trying', 'good' or 'awesome'.
- Kinchant OEC was successful in their application for DERM's 'Do the right thing, Use the right bin' campaign in 2010, so the labelled bins make it easier for Centre visitors to 'use the right bin'.



- The two waste industrial bins that used to be emptied weekly are now on an 'as needed' basis so there are savings occurring.
- KOEC is using Nova Green Handtowels made from sugar cane bagasse and wood pulp.
- Lastly, to limit the number of plastic bin liners, KOEC has changed to biodegradable 'Biobags' as advertised in 'Organic Gardener'. They are used throughout the centre and work well if used immediately. Any amount of storage of the bags means that they start to break down and are unsuitable as bin liners. This means that Donna must actively rotate stock. There are some instances where the bags are not fit for the purpose, so the original 'cradle to grave' single use bags are used.



That is about it from us at Kinchant Outdoor Education Centre.

Article contributed by:
Marjorie Ross,
 Sustainable Schools Facilitator,
 Kinchant Outdoor Education Centre

Location, Location, Location

Location, location, location are said to be the three golden rules of real estate. At Camp Fairbairn, we believe that the same rules apply to Outdoor Education Centres and our location on the shores of Lake Marraboon is one of the things that defines our unique identity.

Access to the hundreds of kilometres of empty shoreline and roughly 15,000 hectares of water that make Queensland's second largest dam, provides a water focus for many of our activities. If we are not on it or in it we can see it.

The view from the top of our climbing and abseil tower, especially at sunset, is well worth the effort of the ten metre climb.

Canoeing at Camp Fairbairn means different things to different groups. At the primary level, students receive basic safety and paddling instruction before heading out on a three hour tour. High school students have the added option of navigating themselves around our water-based orienteering course using handheld GPS units. Both groups work toward curriculum outcomes in teamwork, communication and resilience while exploring our lake environment and enjoying the varied birdlife.

Paddling to our overnight campsite takes most groups around an hour and a half. Once around the corner of the bay, students are in a natural environment with little to remind them that civilization is just a short drive away. Once onsite the students build shelters and are usually finished in time to watch the sun set over the lake. On the following day the paddle back goes a bit faster and usually includes some bird spotting and a tour of the quiet back corners of the lake. Graceful Brolgas walk behind groups of Pelicans and Royal Spoonbills on the shore while Whistling Kites circle noisily overhead providing students with a memorable experience.

Raft building is another activity enjoyed by many groups. Students use a collection of sticks, boards, ropes and barrels to create their raft which is then tested in a Camp Fairbairn raft race across a small section of our bay. The rules of the raft are set by the students but usually include being able to float, staying together and being able to carry the group of three or four.

Future plans for our centre include:

- Re-introducing sailing as an activity after a long break.
- Working through the requirements of the CARA process.
- Renovating our small fleet of Caper Cats is keeping us busy with an aim of being able to offer sailing by Term 4 2013.
- We are also working with a regional environmental organization to develop new activities around water quality and appreciating the biodiversity of the lake.

In the same way that we challenge visiting students to work cooperatively and think creatively to solve problems, we are working with the strengths of our team to improve our centre, attract new visitors and increase our relevance.

Location, location, location, ours can't be beaten!

Article contributed by:
David Murchie,
Teacher, Camp Fairbairn OEC



Dear Tallebudgera Beach School Staff

I am very thankful for all the things you have done for us; most of the activities were fun and exciting.

I am thankful for taking care of us too, when we are too close to the red and yellow flag, you stop us, and let us swim back to the middle of the red and yellow flags which is safe.

I will never forget it!!!

From Sunny Chung



Dear Tallebudgera Beach School

THROUGH OUT THIS TRIP I HAD LOTS OF DIFFERENT CHALLENGES, WHICH MADE THE TRIP EVEN BETTER. ☺

I DIDN'T EXPECT THE FOOD TO BE THIS GOOD, THANK YOU CHEF FOR COOKING US SUCH NICE MEALS. ☺☺☺



I APPRECIATE THE STAFF WHO SACRIFICED THEIR ANZAC DAY AND TOOK US TO THE AMAZING BURLEIGH HILL. ALTHOUGH IT WAS A TIERING WALK THE VIEW WAS **AMAZING!!** ☺☺



IT WAS SAD WHEN WE ALL HAD TO LEAVE CAMP AND GO BACK TO HONGKONG ☹.

THANK YOU

TALLEBUDGERA BEACH SCHOOL FOR EVERYTHING! ☺☺

FROM KRISTINA LEE



Dear Tallebudgera Beach School Staff

Thank you for taking care when we were on the fantastic Australian world classroom trip.

I was really pleased when you took us to Sea World and every thing else because it would always end up fun and it cheered me up, thank you for that.

The best of all is the Outback Spectacular, it was wonderful and the food was great so thank you for taking us to this spectacular show.



I liked canoeing and body boarding, it was marvelous. It was so fun that I want to do it again and again. In canoeing I was afraid of falling into the water and getting **EXTREMELY** cold but I finally overcame it, thanks.

I WILL NEVER FORGET YOU AND AUSTRALIA
Regards, Keene

International Students at Tallebudgera

Earlier this term a group of 100 students from Yew Chung International School in Hong Kong visited Tallebudgera Beach School for their annual Australian Experience. They took part in the standard Beach School camp activities as well as attending an Anzac Day Service, Sea World and the Outback Spectacular. These are letters they wrote when they returned home.

Amaroo celebrates National Sorry Day

Below: Damon Anderson, Year 12 student from Oakey State High School in front of the new mural by Kym Walmsley that was launched at the Amaroo EEC National Sorry Day celebrations.
[Photo contributed by Toowoomba Chronicle]

[Modified extract from Toowoomba Chronicle, Mon. 27th May 2013]

Amaroo Environmental Education Centre celebrates National Sorry Day with the launch of a mural that depicts our new vision.

Indigenous culture and environmental sustainability have been blended into a stunning mural that will take pride of place at Amaroo Environmental Education Centre. Over 50 people attended the launch of this stunning mural.

Principal Cam Mackenzie was thrilled to unveil the mural, painted by Toowoomba artist Kim Walmsley, as part of yesterday's National Sorry Day celebrations. "It is about our vision for the future," Mr Mackenzie said.

"Our new vision statement is 'a community that cares for self, others and the environment to achieve enough for all forever'."

Highfields State School captain, Mikeely Fanning, spoke of the annual excursions she had enjoyed at the Amaroo Centre during her seven primary years. She also spoke of what she had learned from them. "The variety of topics covered has been immense," Mikeely said.

Conrad Bauwens, traditional custodian of Gummingingurra, welcomes us to Country and Paul Carmody, Teacher at Amaroo EEC presented his entertaining and educational acknowledgement of country.

The mural has been customised to represent the surroundings of the Amaroo Environmental Education Centre near Highfields. King parrots, willie wagtails, blue wrens, bull ants and wattle seeds are all featured in its swirling pattern of colours, in fact our resident willie wag-tail watched the whole ceremony.

Toowoomba Regional Council Deputy Mayor, Mike Williams, was also at the launch to show council's support for the work done at the centre. Mr Mackenzie said he was "beyond thrilled as it captures everything about our new vision for the centre."

Article contributed by:
Cam MacKenzie,
Principal, Amaroo EEC



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