



RGSQ Bulletin

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Patron: [Her Excellency the Honourable Dr Jeannette Young AC PSM, Governor of Queensland](#)

President: Mr John Tasker

What's happening on Council?

The Society's Council met on Tuesday 21 November. Items of interest include:

- The lift in our building is being replaced. It is scheduled to be out of service from 15 January to approximately 22 March. Access to the Society's premises on the first floor will be via a set of stairs.
- With no lift during that period, the school mail-out for the Australian Geography Competition will be earlier than usual. Rachel will email our regular volunteers when she has a confirmed date. If you are interested in helping but haven't done so before, please let Rachel know – AGCCoordinator@rgsq.org.au.
- The quality of the November lecture on Zoom was poor, perhaps influenced by the Optus outage a few hours later. The IT Management Committee had already been investigating changing plans/providers. This has now become a priority.
- The Collections Committee is investigating making digital copies of interesting material held by the Society and making these accessible on the web via e-Hive.
- The upcoming events in the Geography in Conversation and Geography Matters series are looking great.
- The Body Corporate has asked us to remind members that they can only park in the four spaces designated for the Society's use.
- Voting on the 2023 photo competition (Queensland's weather) was underway.
- The New Zealand trip had been very successful, with a highlight the days spent with Jamie Shulmeister (past president of our Society and now Professor of Geography at the University of Canterbury, Christchurch).
- The Young Geographers had just returned from a weekend camp at Main Range NP. Activities included water sampling that will contribute to the Great Australian Wildlife Search. The new eDNA technology means scientists can identify animals that have been in the water in the previous 14 days!

For further information on any item, please talk to a Councillor at a Society event, or send an email to info@rgsq.org.au.

2023 RGSQ Christmas Party

Tuesday 5 December 7.30pm

Register: <https://rgsq.org.au/event-5431242>

Treks and Activities welcomes you to the 2023 Christmas Party to be held at our premises at Gregory Place, Level 1, 28 Fortescue St, Spring Hill, on Tuesday 5 December at 7.30pm.



Christmas cake, tea and coffee and wine/beer/cider/soft drinks will be provided.

Please consider bringing a plate to share.

Short presentations, with slides, will be given covering the Society's events during 2023. This is a free event for members and \$10 for non-members and guests.

Everyone is very welcome.

Congratulations

Congratulations to the students who will represent Australia at the next International Geography Olympiad to be held in Dublin in August 2024:

Drew Davison – Hale School, WA

Isla Moore – Canberra Grammar School, ACT

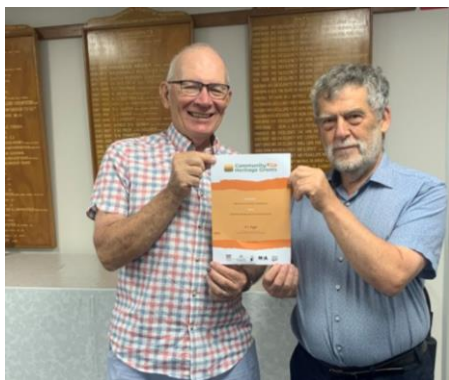
Oliver Walsh – Barker College, NSW

Sophie Chang – Camberwell Girls Grammar School, Vic

The team leaders will be our President John Tasker and Julie Hearnden, an NT teacher. The students were selected from the 2023 Geography's Big Week Out held in Litchfield National Park, NT, at which John and Julie were members of staff. The students selected for Big Week Out are chosen from high-scoring Year 11 students in the Australian Geography Competition.

RGSQ awarded grant in the 2023 Community Heritage Grants program

RGSQ is thrilled to be a 2023 Community Heritage Grants (CHG) recipient. This is the fifth CHG grant received by the Society since 2017. The latest grant funds RGSQ to employ a professional conservation company to repair and restore eight of the older and more fragile books from our library collection. After conservation the books will be able to be handled and contribute to the life of the Society once more.

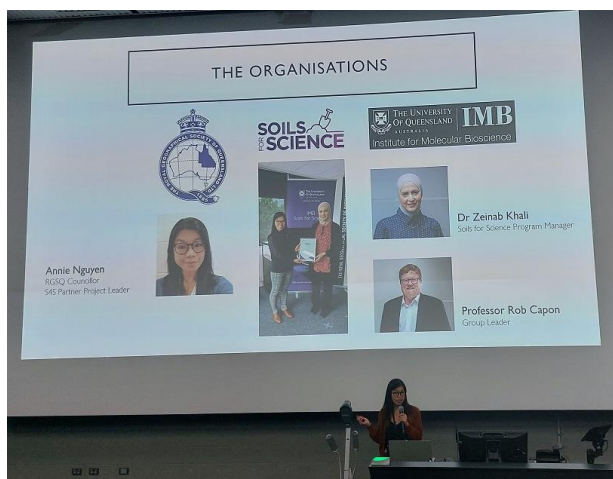


RGSQ's Honorary Librarian, Jim Graham and Collections Committee Chair, Rob Cook, with the award certificate.

The Community Heritage Grants program provides non-profit community organisations with funding to assist with the preservation of locally owned, but nationally significant collections. The grants also aim to make these collections more publicly accessible.

CHG is funded by the Australian Government through the Department of Infrastructure, Transport, Regional Development, Communications and the Arts ([Office for the Arts](#)); [National Library of Australia](#); the [National Archives of Australia](#); the [National Film and Sound Archive](#) and the [National Museum of Australia](#).

SOILS FOR SCIENCE



On 21 November Ngoc (Annie) Nguyen presented a paper at the Australian Citizen Science Association Conference 2023 on RGSQ's partnership in the Soils for Science (S4S) Project. S4S is a project of the University of Queensland Institute for Molecular Bioscience. RGSQ are proud to partner with Soils for Science to fast track the discovery of next generation antibiotics. The rise of antibiotic-resistant bacteria and fungi – also known as 'superbugs' – has the potential to set medicine back almost 100 years to a pre-

penicillin-era if we don't take drastic action. RGSQ members and friends collected 650 soils samples in 130 kits for IMB researchers to help them discover microbes that could be developed into new antibiotics, and other life-saving medicines. Annie's paper described the benefit to RGSQ through involvement of members and friends in this first Citizen Science activity undertaken by RGSQ for many years.

She included two testimonials: *"We thought it was a great way to make a small contribution towards science research"* T.M., Magnetic Island

"I'm really keen for new antibiotics to be developed – my father's life was saved by some of the first penicillin bottled by DH Faulding in Adelaide." H.S., Brisbane

Annie and Pamela Tonkin joined attendees from all over Australia and overseas (USA and UK, possibly others) at the conference, which was held at The University of the Sunshine Coast, Sippy Downs Campus. The conference lasted three days, however we only attended the one day. The program for day 1 included 4 keynote addresses, 3 streams of presentations and 41 presentations to choose from. The program for the following two days was equally full.

We came away with an enormous amount of knowledge and numerous contacts.

Contributed by Pamela Tonkin

Geography in Conversation

Blue heart - the Wetlands Project at Yandina and other Carbon Sequestration Restoration Projects



Landholders on the Maroochy River floodplain have struggled to find productive uses for their properties since the closure of the Nambour sugar mill in 2003. The future of this 5000-hectare area as part of the Sunshine Coast Council's Blue Heart project was therefore keenly considered during the Geography in Conversation evening on October 24.

The three expert panellists were *Craig Dooland*, Sunshine Coast Council Biodiversity and Waterways Coordinator, *Dr Valerie Hagger* from the University of Queensland School of Environment and *Dr Fernanda Adame Vivanco*, Research Fellow at the Coastal and Marine Research Centre, Australian Rivers Institute, Griffith University. Graeme and Stella Rush led a comprehensive discussion which allowed attendees to gain an understanding of the challenges and opportunities involved in the Blue Heart and other blue carbon projects.

Blue carbon refers to the accumulation of carbon in the plants and soils of coastal ecosystems: mangroves, seagrass meadows, salt marshes and tidally inundated forests. An additional sequestration of carbon occurs in the accumulation of tidal sediments. Marginal agricultural lands like those in the Blue Heart area are well-suited to conversion for blue carbon purposes. As tidal inundation and forecast sea level rise rule out residential development, emerging markets for carbon credits and biodiversity offsets present landholders with greater long-term returns compared to alternative land uses.

A unique feature of the Blue Heart project is that it will result in the creation of an entirely new ecosystem. To obtain carbon credit certification, blue carbon projects must remove existing infrastructure such as drainage gates. Salinity in the Maroochy River floodplain is already increasing as disused drainage gates from former cane farms fall into disrepair and salt water encroaches further upriver. While melaleuca forest dominated the floodplain before its agricultural development, mangrove wetlands are expected to become the new normal as the Blue Heart project removes the remaining drainage gates and the salinity becomes permanent from tidal processes and the forecast sea level rise by 2100. Climate change may yet cause unexpected shifts in the makeup of this novel ecosystem emerging from the Sunshine Coast Blue Heart in coming decades.

Contributed by Riley Kernaghan

Treks and Activities event report: Brisbane – Gold Coast cruise, 16 November



The final outing for 2023 arranged by the Treks and Activities Committee (TAAC) saw twenty-four (24) members board the *Lady Brisbane* - a classic 30m, 1972 timber-built cruiser - for a 6-hour journey from Hamilton, along the lower reaches of the Brisbane River, and through the mid and lower regions of Moreton Bay to the northern end of the Gold Coast. Our party shared the vessel with about 80 other travellers. The weather cleared to idyllic sailing conditions.

The cruise from Hamilton provided views of many of the river side developments - both industrial and residential. Viewing the massive Gateway Bridges from underneath is truly impressive, as is the array of superyachts - large and larger - populating the several marinas and slipways - all located, curiously, on the southern side of the river. The

new and recently commissioned cruise ship terminal at Luggage Point, unoccupied at the time of our cruise, stands out against adjacent industrial installations, some of which have seen better days.

We cruised past the extensive network of wharves comprising the Port of Brisbane, with the associated massive container lifting cranes, and bulk commodity handling facilities. It was interesting to see the deck cargo on one berthed freighter - a rack of colossal wind turbine blades, destined, no doubt to spoil the landscape somewhere. The port continues to expand beyond the river mouth into Moreton Bay with further reclamation work currently underway. To the north, constant aircraft movements reminded of the proximity to the Brisbane Airport.

It was of interest to observe how shallow the river is in parts close to the main shipping channel and around its confluence with Moreton Bay.

The wide river mouth morphed into Moreton Bay, the sand hills of Moreton Island in the background. We turned right (sort of) and headed south to thread through and around the network of bay islands. Commentary provided by the *Lady Brisbane* crew traced the history of several of the more notable and well recognised island names we passed - St. Helena and its penal colony days; Peel Island and the role it filled supporting a leper hospital; Coochiemudlo and its connection to Matthew Flinders; and more recently, the Russell, Macleay and Lamb islands' connection to dubious land sale scams.

These, if not all of the bay islands provide a delightful recreational boating environment - but wise to keep an eye on the wind direction, currents and tidal movements. There is an extensive network of navigation buoys and channel markers across what is regarded as a generally shallow bay.

Cruising south, the waterway gradually narrowed as we passed first North, then South Stradbroke Islands. On the mainland side, the intense developments of bayside suburbs eased to a more rural landscape - sugar cane growing and the Rocky Point sugar mill holding out against advancing urban expansion. At many points, the natural shoreline has been modified to accommodate marinas, with associated residential developments.

The high-rise developments of the Gold Coast became more prominent in the distance as we headed towards our departure location at Paradise Point - jetty redevelopment work at the Southport Marina necessitating a change to the original schedule. Passing Sovereign Island - the grandeur of many (or all) of the waterfront residences matched only by the opulence of the yachts moored to their private jetties.

Our maritime experience ended; we boarded a coach for the return journey to Brisbane. This provided the opportunity to see something of the intense residential development of the northern Gold Coast, from the comfort of an elevated coach seat, and being driven by someone else. The density of traffic, in both directions, evidence of the population concentration in this part of SE Queensland.

Contributed by Roger Grimley

REPORT: New Zealand trek

From 19 October to 2 November, nineteen RGSQ members enjoyed a geographical tour of New Zealand's Te Wai Pounamu/South Island. A good time was had by all. Throughout the trip we had exceptionally fine weather (although still a bit cold for Queenslanders) with only a couple of afternoons of rain. Spring was evident everywhere in the bright green new leaves of trees and flower displays, including beautiful blooms of rhododendron bushes. Despite their notorious reputations, our crossings of both Cook Strait from Wellington to Picton and Foveaux Strait from Bluff to Stewart Island were unusually (and thankfully) calm. During the trek we had many opportunities to encounter native wildlife – New Zealand fur seals, sea lions, birds including kea, kaka, kiwi and albatross – and walks in native forest reserves.



At Lake Pukaki, MacKenzie Basin, Thursday 26 October

In Christchurch we visited the Antarctic Centre and experienced the “snow room” temperature of minus 18 degrees and met some very friendly husky dogs.

Professor Jamie Shulmeister, Head of Geography at University of Canterbury and former RGSQ President, hosted us at the University for very interesting presentations by Geography staff on their local research projects. Jamie was then with us for three days, taking us to the “Red Zone” earthquake recovery area in central Christchurch and touring across the Canterbury Plain to visit Alpine lakes and Aoraki/Mt. Cook.



Snowstorm at Aoraki/Mt. Cook, Friday 27 October

We were blessed with an overnight snowstorm at Aoraki resulting in a brilliant snowy landscape and a fine sunny day the next day. We hiked to the Tasman glacier lookout on the terminal moraine at Tasman Lake. Jamie's

commentary, explaining the geography of glaciated and other landforms and his local knowledge of contemporary NZ, was a highlight of the tour for everyone.

Overnight sailing on Doubtful Sound was truly awesome, with calm weather enabling the ship to venture part way out of the fjord into the Tasman Sea. During two days on Stewart Island, we visited the predator-free native bird and forest reserve on Ulva Island. Some members encountered a party of frolicking kiwis on a night walk. Our tour ended in Dunedin with a visit to the Albatross Centre where we caught glimpses of the amazing birds as they landed in their colony on the headland.



Sailing on Doubtful Sound, Saturday 28 October

Our thanks to Stuart Betlem of Integrity Travel Durack for making all bookings for accommodation, coach and meals which were excellent.

While this is just a snapshot of our tour experiences, we will be preparing a longer, more detailed report with many more photos, which will be available in due course on the RGSQ website “past events” page.

Contributed by Iraphne Childs, Trek Leader

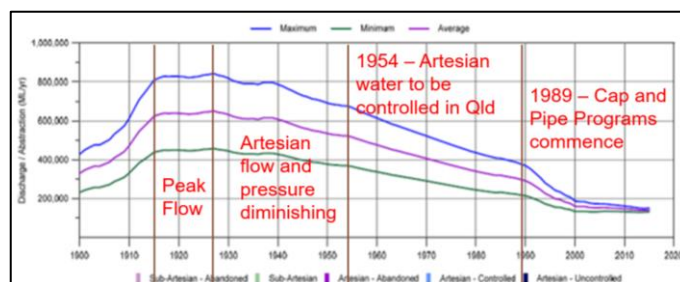
Geography Matters

The Great Artesian Basin, a Truly Great Resource

Presenters: Adrian McKay and Henk van Paridon

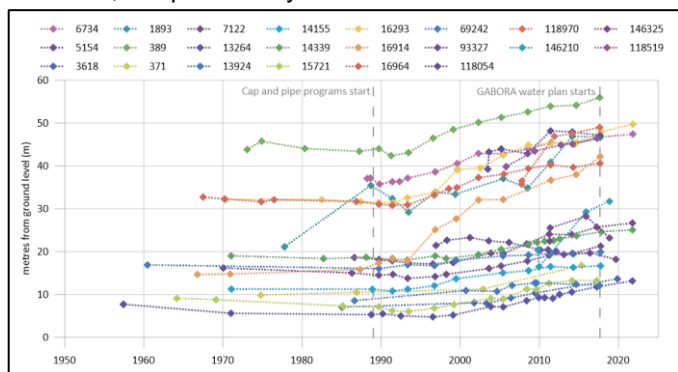
Adrian started, as background, with a description of the geology and structure of the Basin, and some details of how it operates, both artesian and sub-artesian and including mound springs. He then proceeded to a historical sequence of how the Basin has been managed, starting with (arguably) the first bore at Helidon in 1879 to its peak usage around 1920 to diminishing flows because of uncontrolled use until the 1954 management plan to the 1989 “cap and pipe” initiative.

The graph below shows the diminishing yield of the resource, admittedly partly because of overuse and decreasing pressure, but also from more efficient control of that use.



The post-1989 curves also obscure the enormous benefit of piping water rather than losing it through evaporation from open bore drains.

The second graph shows the increase in hydraulic head in monitored bores as a result of reducing total draw on the system because of decreasing losses by reducing 34,000km of open drains to 4,000km between the 1960's and 2018, but particularly since 1989.



Adrian then fielded questions from Henk and the chat to flesh out further details about sustainability, uncontrolled bores, irrigation, fracking and the injection of coal seam gas water.

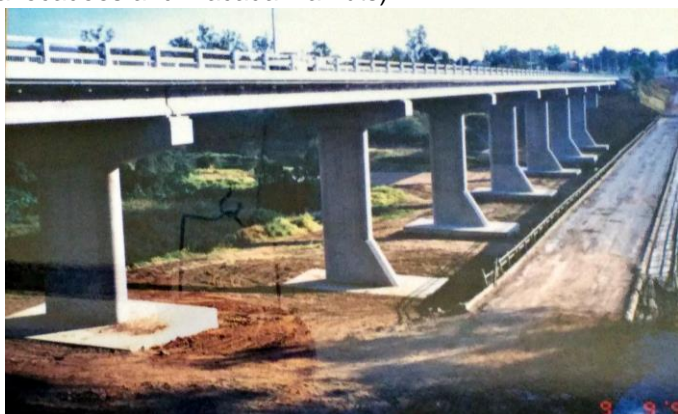
A most informative session, which can be found on the Society's YouTube channel:
<https://www.youtube.com/watch?v=gKna0hOYC7s>.

Contributed by Stuart Watt

BURNETT TRIP REPORT

From the 3rd to the 7th of September, twelve members of the Society explored the South and Central Burnett region from Yarraman to Bundaberg and Bargara in a drive-yourself tagalong trek.

The Burnett River catchment is one of the largest in coastal Queensland east of the Dividing Range, with a complex variety of landforms, geology, soil types, settlements and economic activities. Agriculture is the principal land use of the catchment with the most important industries being beef and dairy cattle, sugar cane, field crops (e.g. peanuts) and horticultural crops (e.g. oranges, avocados and macadamia nuts).



A photo of a photo! Road bridges across the Burnett River at Gayndah in 1990 - the old low-level bridge (now removed) and the modern high-level one. Debris from a more recent (2013?) flood is visible under the decking of the modern bridge. The 1990 photo is displayed at the Gayndah Historical Museum.

Starting with a short walk through The Palms National Park, we learnt of electricity generation at the Nanango Energy Centre and explored the cosmos through telescopes at the Kingaroy Observatory. A visit to the Ration Shed Museum in Cherbourg told us of the story of Barambah/Cherbourg Aboriginal reserve. Cherbourg is now a town with its own Local Government.

In Gayndah, we visited the local museum and saw the transport (road and rail) and lungfish (ceratodus) displays. Moving on to Paradise Dam, we learnt the story behind its construction, concerns about the structure and measures being taken to restore its integrity.

In Bundaberg, we visited the Hinkler Hall to learn the story of Bert Hinkler's sixteen-day(!) flight from England to Australia, pioneering a major transport route – a journey illustrated by an enormous globe of the world. Hinkler was born in Bundaberg. Moving on to Bargara, we had a very informative visit to the Burnett Mary Regional Group (BMRG) where we learnt of that organisation's environmental research and outreach activities, as well as an informative talk by a Ranger at the Mon Repos Turtle Centre.



Trek members inspect coral growing in a tank at Monsoon Aquatics.

Highlights of the trek included a talk in Bundaberg about the Sunwater water storage and distribution system in the Burnett River catchment and a tour of the Monsoon Aquatics coral aquaculture facility at the Port of Bundaberg.

The trek was enriched by the personal knowledge shared by three members - Bob Reid who told us of the basalt flows from Mt Le Brun (Coalstoun Lakes) to Ban Ban Springs, Barambah Creek and the Burnett River, Col Lynam (seismicity and earthquakes around Gayndah) and Ron Owen (Roller-Compacted Concrete as used in Paradise Dam).

From an ancient volcanic past to modern changes in the agricultural landscape and many other features, there is much of geographical interest in the Burnett catchment.

Contributed by Ralph Carlisle, Trek Leader

Vale Brian Mealey

We are sad to announce that Brian Mealey passed away on 23 September, aged 93 years. His wife, Margaret, also died this year on 19 June aged 90. They had been together for 65 years. Many members will remember them. Although no longer RGSQ members, for many years both Brian and Margaret were active in the Society.

Past President, Iraphne Childs, represented RGSQ at Brian's funeral on Friday 29th September at the Christ the King Catholic Church, Graceville. Brian's daughter Rachel, in her eulogy mentioned that the RGSQ had been an important part of Brian's life, enjoying greatly the activities, fellowship and leading treks. Iraphne was able to speak to Rachel after the service to convey our thoughts to the family on behalf of members of the RGSQ.

Contributed by Iraphne Childs

Welcome New Members

We have much pleasure in welcoming *Bradley Thomas, Jill Cross, Joan Esterle, Chiamaka Olisa and Andrew Williams* as new members. We hope your association with your new Society is mutually enjoyable.

Merry Christmas

Society Councillors and staff wish all members a safe and happy Christmas. We look forward to seeing you at the Christmas Party on 5 December and at our many events in 2024. Our office will be closed from 22 December to 7 January.

Contributors: Kath Berg, Ralph Carlise, Iraphne Childs, Rob Cook, Roger Grimley, Riley Kernaghan, Kay Rees, Chris Spriggs, Pamela Tonkin, Stuart Watt

RGSQ Bulletin

December 2023

Lecture/Meeting: Mon 4 December

Map Group's Show'n'Tell

Tue 5 December

RGSQ Christmas Party

www.rgsq.org.au

info@rgsq.org.au

The December Council will meet on the second Tuesday of the month.

The Royal Geographical Society of Queensland Ltd
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