



RGSQ Bulletin

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

President: Mr John Tasker

Welcome New Members

We have much pleasure in welcoming *Ngoc Nguyen* as a new member. We hope your association with your new Society is long and mutually enjoyable.

What's happening on Council?

The Society's Council met on 15 March. Highlights of the reports discussed by Councillors included:

- President (J Tasker): upcoming strategic plan review
- Treasurer (A Lau): changes to accounting system; replacement of auditor; planning for 2022/23 budget
- Business Manager (L Darii): size limits on upcoming events; changes to membership/ bookings management system
- Australian Geography Competition (R Honey): teething problems with new data management system; 688 schools had entered the 2022 Competition and late entries were still being accepted
- Collections (R Cook): aiming to acquit current Community Heritage Grant in time to apply for another one in 2022; planning an exhibition on JP Thomson
- Property (P Tonkin): need for extra power point for display cabinets and additional inter/intranet cabling
- Publication (I Childs): 2022 photo competition theme and judging; previous scientific study reports
- Scientific Studies (I Childs): progress on new project based at Binna Burra
- Treks and Activities (C Spriggs): review of health and safety and risk management in procedure manual
- Map Group (K Rees): details of upcoming events
- Young Geographers (G Pickering): report on welcome event; regular posts on Facebook
- Geography Forum (P Tonkin): planning new series of interactive events
- Ken Sutton Trust (I Childs): update on proposed changes to the Trust

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

Council resignation

Ian Harding has resigned from the Society's Council. Ian has made a significant contribution to the operation of the Society during his years on Council. We will still be able to call on his expertise and Ian is continuing as a member of the Finance Committee. Thanks Ian.

WHAT'S ON

For all upcoming RGSQ events, please visit the Society's website www.rgsq.org.au under 'What's On'.

April Lecture

The Realities of Rain

presentation by Jeremy Bishop, Seqwater

Tuesday 5 April 7:30pm

Location: on premises and online

Register: <https://rgsq.org.au/event-4746403>



Photo: North Pine Dam spilling, February 2022, by Seqwater.

Join us for a presentation by Seqwater entitled "The Realities of Rain". In South East Queensland, we can't always rely on the rain to fall when and where we need it, so we must plan now to provide safe and reliable drinking water supply for a growing region. In the presentation, we'll discuss how the water industry is set up, the challenges Seqwater face as we look to provide drinking water in SEQ, what Seqwater is doing to plan for our future, and the role climate resilient assets, like desalination and purified recycled water play.

Additionally, the presentation will recap the recent wet weather event and its impact on our water security.

BIO: Jeremy Bishop is Team Leader, Community Engagement at Seqwater, the bulk water supplier for South East Queensland. The Community Engagement team works to increase the water literacy of the South East Queensland community. As part of his role, Jeremy creates strategic engagement initiatives for the Water Security Program, Seqwater's long-term plan to provide drinking water to a growing region. Before arriving in Australia, Jeremy lived in Washington, D.C. and served in the administration of President Barack Obama for nearly eight years, working on labour policy at the U.S. Department of Labour.

Please note: The lecture link will be emailed to all registrants closer to the lecture date. If you have any questions, please email us at info@rgsq.org.au.



TREKS AND ACTIVITIES CALOUNDRA GEMS DAY ACTIVITY Wednesday 27 April

When: 8:00 am departure, return by 5.00 pm

Where: Bus stop 27 in Park Avenue Clayfield, near Eagle Junction Station

Numbers: 27; 2 spaces left

Cost: members \$70; non-members \$75

Includes the bus hire, entry to the Aviation Museum and donations to volunteers at the other venues.

Full details and to register: <https://rgsq.org.au/event-4688664>

Map Group Presentation

Where's Wallace? Finding Lost Qld Place Names

6 Apr 2022, 10:00 AM – 12:00 PM @ Gregory Place, 1/28 Fortescue St, Spring Hill Qld 4000 and via Zoom

Presenter: Dr Kerry Raymond, Map Group member

Register: <https://rgsq.org.au/event-4666893>

Dr Kerry Raymond is a retired professor of information technology. In retirement she is an active contributor to Wikipedia and an amateur researcher of Queensland history.

Many places in Queensland have changed names over the years, or just disappeared off the map completely, making it a challenge to locate particular places. Kerry's interest began with a name on her great-grandfather's birth certificate and led to the creation of her Renamed Places in Queensland website and a passion for locating our lost place names, closed schools, etc. In this talk, Kerry will present the techniques and resources she uses to locate lost places in Queensland.

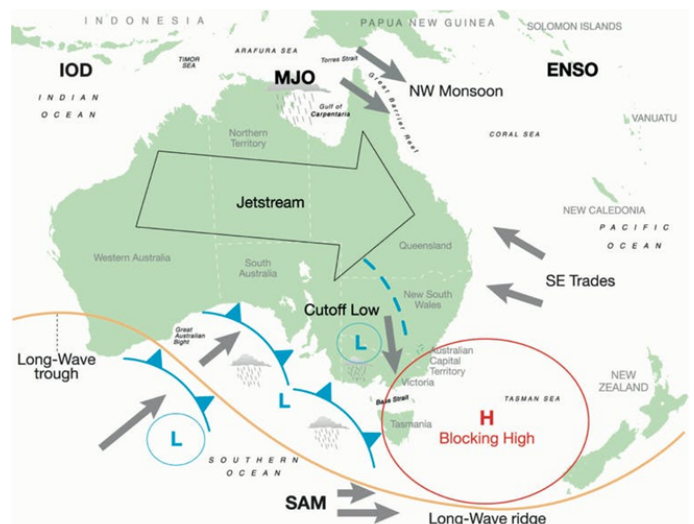
Research News

Stalled weather: how blocking high-pressure air systems drive floods and heatwaves

by Steve Turton, Adjunct Professor of Environmental Geography, CQUniversity and RGSQ Councillor

The recent "rain bomb" which inundated Australia's east coast and the heatwave in Western Australia were associated with "stalled" weather systems. Normally, Australia's weather systems are driven from west to east by [jet streams](#): narrow bands of fast-flowing air high up in the troposphere, the lowest layer of Earth's atmosphere. But when weather systems stall in a particular place, usually because of "blocking" high-pressure systems that stop them moving on, they can produce devastating extended periods of heat, cold, rain or floods. As the climate continues to change, these stalled weather systems are [expected to get bigger](#).

Stalled weather systems: [Blocking systems](#) are persistent high-pressure systems combined with one or two low-pressure systems. High-pressure air systems are associated with clear, dry and often calm weather, while low-pressure systems are associated with rising air, cloudiness, strong winds and rain. Together, the two systems work against each other to effectively "stall" the weather. Depending on where they occur, blocking systems are often associated with record-breaking weather events and human deaths. For example, the deadly heatwaves in [France in 2003](#), [Russia in 2010](#), the [North American cold wave in 2021](#) and the record-shattering [Western North America heatwave](#) in June and July. The latter event caused some of the highest temperatures ever recorded in the region, including the highest temperature ever [measured in Canada](#) at 49.6°C.



A typical blocking high weather pattern in the Tasman Sea. Source: Risbey et al (2008). Permission to reproduce: Michael Pook.

Stalled weather in Australia: Blocking highs in the [Australian region](#) usually occur in the Great Australian Bight and the Tasman Sea. These strong high-pressure systems typically form [further south](#) than usual remaining almost stationary for an extended period, blocking the

normal easterly progression of weather systems across southern Australia. They can occur at any time of year, and usually stay in the Australian region for several days to several weeks. A [prolonged blocking high](#) in the south Tasman Sea in January and February 2019 caused record heatwaves for many inland towns in Australia. Adelaide recorded the hottest day for any Australian capital city (46.6°C) on January 24. The same blocking high prevented the movement of a deep monsoon low in North Queensland, resulting in the equivalent of a year's rain in a week over the [Townsville area](#) in early February 2019.

The 2022 rain bomb: In late February 2022, a stalled weather system caused [heavy rain and flooding](#) over large parts of Southeast Queensland and Northern NSW. A stubborn blocking high near New Zealand prevented it moving away to the east. A region of low pressure in the upper atmosphere became cut off from the westerly air current further south, creating a trough of low pressure at surface level. This created the perfect mix of upper and surface atmospheric conditions for what has been called a "rain bomb" or a "[river in the sky](#)". The rain bomb caused extensive [major flooding](#) in Brisbane smashing its three-day record with 741mm of rain over four days – almost three-quarters of its annual average rainfall! The city endured flooding like the [disastrous 2011 floods](#). More than 15,000 homes were estimated to have been inundated in Brisbane by the event. The Brisbane River peaked at 3.85 metres, below the 4.46 metres experienced in 2011. However, the [two flood events are very different](#), and some suburbs experienced worse flooding than in 2011. [Gympie](#), north of Brisbane, and [Lismore](#) in northern NSW experienced catastrophic flooding of their central business districts. Gympie endured its worst flood in 120 years and Lismore its highest ever recorded flood level, above the previous record by about 2 metres.



Lismore floods, February/March 2022. Image source: [The Conversation](#) 3 March 2022.

<https://images.theconversation.com>

Future events: Climate change fuelled by increasing greenhouse gases is causing more [extreme weather](#) events worldwide. Many of these events are associated with "stalled" weather systems. [Recent research](#) has shown extremely high rainfall and flooding events will become more likely as the atmosphere and oceans warm under climate change. What does this mean for the future? Can we expect more rain bomb events? The answer to all these questions is yes, and rising greenhouse gases and warming of the atmosphere and oceans are to blame. The rise in average global temperatures has driven [more extreme rainfall events](#) since the 1950s. [Australian land areas](#) have warmed about 1.4°C since 1910. A warmer

atmosphere can [hold more water](#). For every 1°C of extra warming, about 7% more water can be saved as water vapour. Given the right atmospheric triggers, vast amounts of stored water can be released as heavy rainfall. Currently, [climate models](#) tend to [underestimate](#) both the frequency and duration of blocking events. Scientists continue to grapple with this problem in their models, and it forms the basis of ongoing research.

References:

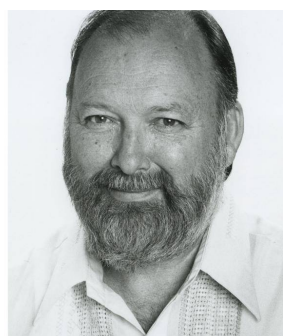
Steve Turton *Stalled weather: how stuck air pressure systems drive floods and heatwaves* [The Conversation](#) March 3, 2022

Kimberley Reid and Andrew King *Like rivers in the sky: the weather system bringing floods to Queensland will become more likely under climate change* [The Conversation](#) February 27, 2022

Gavin D. Madakumbura and Alex Hall *Global evidence links rise in extreme precipitation to human-driven climate change* [The Conversation](#) July 7, 2021

HENRY NIX AO: A PERSONAL REFLECTION

Contributed by Ken Granger, RGSQ member



It is with great sadness that I report the passing on 2 February 2022 of Henry Nix, arguably one of Australia's greatest applied geographers. The scope and value of his contribution to Australian geography and environmental knowledge cannot be overstated. The RGSQ honoured his contribution with the awarding of the Thomson Medal in 2008.

Henry was born in Ipswich in 1937 and from an early age took a keen interest in the environment, especially the bird life in and around that industrial town. At the age of 13 he joined the Royal Australasian Ornithologists Union, a predecessor of Birds Australia. He attended the Queensland Agricultural College at Gatton before graduating from Queensland University with a Bachelor of Agriculture in 1960.

He joined the CSIRO Division of Land Research and Regional Surveys in 1964. That Division, under the leadership of Alan Stewart, pioneered the development of integrated surveys, drawing together the knowledge of a range of sciences including soils, botany, geomorphology and climatology to produce analyses and mapping of the land use potential of broad areas of northern Australia and PNG. In that very practical, field-based research environment Henry thrived, especially in linking the relationship between climate and the agricultural landscape.

Henry was appointed to head the Centre for Resource and Environmental Studies (CRES) at the ANU in 1986. His wide-ranging knowledge enabled him to meet each of his new academic colleagues on their own terms and to offer valuable insights to each. This was a source of great encouragement for colleagues and students alike. PhD numbers at CRES grew substantially under his leadership, including many that now occupy senior professorial positions in Australia and internationally. I had the very great privilege of spending 1989

as a visiting fellow at CRES and benefitted greatly from the collegial interdisciplinary environment that Henry fostered. A passion for Australian native vegetation and birdlife found expression in his Canberra backyard. His plantings of native plants created an environment that attracted an incredible range of birds. I recall Henry telling me that in a 20-minute count of birds in his backyard he recorded as many species as he had in a similar count in the Amazon. His colleagues remember him as being able to rise above the details and minutiae to look at the big picture, believing that "A continental perspective on our birds and their habitats is a necessary condition for effective conservation". He took a similar view of the conservation of Australia's fresh water fish through his annual holiday field trips to northern Australia.

RGSQ members will recall his Thomson Lecture on a topic that he had become fascinated with as a result of his many trips through the tropical north – the explorer/naturalist Ludwig Leichhardt.

In typical Nix style he delved into many of the lesser-known aspects of that explorer from materials held in various museums in Germany.

Henry received many honours including being made an Officer in the Order of Australia in 2000 for his service to the environment, particularly the conservation of natural resources, and to land management through the development and application of simulation models for ecologically sustainable land utilization.

Following his retirement as Emeritus Professor at the ANU in 2010, Henry and his wife Katharine moved back to Queensland to a block on the slopes of Ninderry on the Sunshine Coast where he continued his daily count of the local birds up until the end. We have lost a truly great geographer.

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Meeting/Lecture: Tuesday 5 April

The Realities of Rain presentation by Jeremy Bishop, Seqwater

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Wednesday 27 April: Caloundra Gems Day
Activity; Treks and Activities Trip

The April Council will meet on the third Tuesday of the month.

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