



The Tasmanian Geologist November 2021

Future Meetings 2021/22. Put them in your diary

29-30th November 2021 - Virtual GESSS
For eastern Australian States

2nd December - Tasmanian Geoscience Forum at
Tullah on the West Coast (see last page to
register)

*The events and meetings do not end in December
The committee is working on an exciting program
for 2022. If you have any suggestions for
speakers or events please let us know.*

Keep up to date with what is going on at our
Division's website: <https://gsatasmania.org>



NEXT MEETING:

**Thursday 18th
November
6:00 PM**

Eric Roberts

**From dinosaurs to
hominins: 100 million years
of biotic and tectonic
evolution in the Cradle(s)
of Humankind, Africa**

**Geology Lecture Theatre
University of Tasmania**

Join us at 5:30 for nibbles

NEXT MEETING:

From dinosaurs to hominins: 100 million years of biotic and tectonic evolution in the Cradle(s) of Humankind, Africa

The presentation links the geological and biological drivers of landscape and faunal evolution in Eastern Africa, beginning with the break-up of Gondwana and the origins of dinosaurs and modern vertebrates in the Mesozoic and ending with origins of our own species in the Late Quaternary. Eric will discuss the role of plate tectonics in driving biotic, climatic and landscape evolution in Africa, and focus on contributions from his research leading and participating in palaeontological and palaeoanthropological expeditions and discoveries in the East African Rift in Tanzania and the Cradle of Humankind in South Africa over the last 20 years.

Professor Eric Roberts



Eric is a Professor and the Head of Earth and Environmental Sciences at James Cook University (JCU) in Townsville, Queensland. He

has lectured in Sedimentology, Energy Resources and Palaeontology at JCU for the last 11 years. His research is focused on sedimentary basin analysis of both economically and palaeontologically significant Mesozoic and Cenozoic frontier basins across the globe, with a focus on African (and other Gondwanan) basins. This work has ranged from diamond, petroleum and helium exploration projects with industry partners, to dinosaur and hominin exploration with palaeontological collaborators. For further information on Eric and his research group and collaborators visit <http://www.gravelmonkeys.org/>

Please join us next Thursday for a very interesting talk. If you cannot make it in person, we will be streaming it via ZOOM.

<https://utas.zoom.us/j/89889012761>
Meeting ID if you need it is 898 8901 2761

PREVIOUS MEETINGS AND EVENTS

September 28th AIG-GSA Dinner 2021



What a great evening we had at the 2021 AIG-GSA dinner. A free drink and nibbles greeted the 38 guests and attendees. A jazzy vibe atmosphere pervaded the evening provided by the two then

three talented young musicians of the Spicy Veg Trio.

Not one but two Twelvetrees Medals were awarded. Andrew McNeill introduced the medal to the attendees and presented the 2021 Twelvetrees Medal to Emeritus Professor David H. Green, David's long list of innovative scientific achievements, administrative, teaching and service to the Earth Sciences in Tasmania (and beyond) were recognized in this award. It was a pleasure to have David present as the GSA's guest, to accept the medal. He gave a gracious response with reference to SW Carey and Maxwell Banks as inspiring him to pursue a scientific career and ended by thanking his wife Helen, also present, whom he said was happy he came along as it was a reason to get him into a suit.



David H. Green gives his acceptance speech for the 2021 Twelvetrees Medal presented to him by Andrew McNeill (at left) (Photo by G. Cumming)

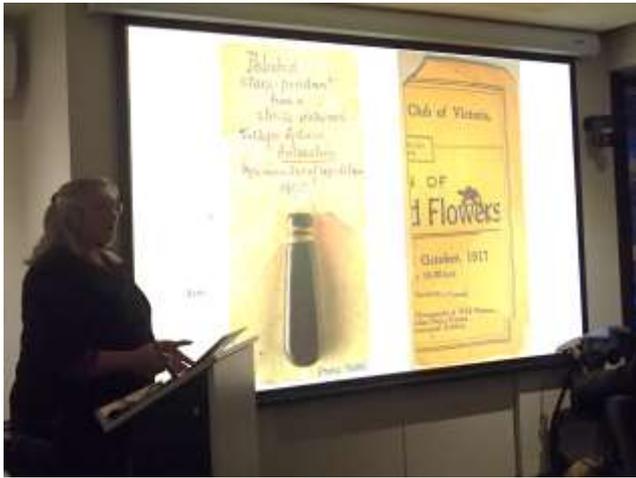
The 2020 Twelvetrees Medal was awarded posthumously to Emeritus Professor Patrick G. Quilty for his contributions to Tasmanian Earth Sciences as a paleontologist and stratigrapher, administrator, explorer, editor, teacher and office bearer. Karin Orth presented the Medal to Dr Eva Meidl, Pat's partner. Eva said she was happy that Pat knew that he had been cited for the medal before he passed away (in 2018) and mentioned that he had finished a book in his final days that is

now published and will soon be available in Tasmania (we will keep you posted on that).



Eva Meidl accepts Patrick Quilty's 2020 Twelvetrees Medal from Karin Orth (Photo by G. Cumming)

Our main meals were provided by the attentive and efficient staff of the Pickled Pear/University Staff Club. The food and time for chatting was followed by the dinner speaker Dr Barbara Frankel. Her presentation was titled 'The Cape Adare Pendant: A journey through Geology and Victorian era Antarctic history'. She spoke about her sleuthing into the origins both historically and geologically of the Cape Adare Pendant (CAP). This object had been found in an Opportunity shop in Melbourne. It has links to the first overwintering Antarctic expedition led by Borchgrevink 1899-1900 based at Cape Adare. Barbara talked a bit about this expedition and some of the characters involved. She went through possible uses this object may have had and who may have owned it. She finished with a bit of geology of the area, a box of rocks that she still wants to look at in the British Museum and the fact that early 1905 analyses from the rocks collected by the expedition and more recent non-destructive techniques on the CAP suggest it is an evolved alkali rock probably a phonolite.



Barbara Frankel explaining her slide of the Cape Adare Pendant on its original label (Photo by G. Cumming)

Dessert followed the questions for the speaker winding up the evening on a sweet note. It was excellent to see people from all parts of the Geoscience community and across the state come together to catch up. Thank you to our partners AIG, the medal recipients, our speaker, the musicians and the staff of the Pickled Pear (University Staff Club) for a memorable evening.



Some dinner attendees, guests and entertainment Photos supplied by E. Lounejeva Baturina.



6th of November Spring Field Trip

The weather forecast for the day of the field trip was looking ominous early in the week, but with Phil's usual influence the storms and rain held off for our look around the rocks east of Remarkable Cave. Last year, the Spring Field trip ended on the rocks close to the car park just east of the caves where attendees examined the complexities of the contact between the heated sedimentary rocks of the Upper Parmeener Supergroup and the roof of the intruding Jurassic dolerite sill. It became too late to get to the final location of that field trip, which were the rocks around Maingon Blowhole. This was the area of interest for this trip.

Participants met at the Remarkable Caves carpark at 10:45 am and set off about 11 am. Clive Calver led the field trip as Phil was unable to attend (was that because the focus was dolerite and not fossils?).



Examining the top of the dolerite sill left to right are Claire Kain, Grace Cumming, John Everard and Karin Orth (Photo J. Halpin)

The upper portions of a dolerite sill form the pavements east of Maingon Blowhole a very deep but narrow gulch that extends 250 m inland from the main sea cliffs. The rocks in this area curve down to the water and expose the chilled roof units of the sill with coarser dolerite below. The chilled roof contains banding that can extend up to 20 m along strike and can be lenticular, thickening and thinning in places. It is associated with felsic and less felsic portions of dolerite as well variations in grainsize. There was

contentious debate about the way in which these bands could form. Interesting theories proposed for layering in large layered intrusions such as the Bushfield and Skaergaard intrusions were brought into the discussions. Some notable features were the coarser portions of dolerite forming cross-cutting veins into the chilled upper dolerite, the irregularities in the contact zone between upper fine-grained and lower coarser dolerite, long pyroxene crystals in some pegmatitic veins and an unusual green-coloured 'vein dyke'.



Noel Kemp admiring the bands in the upper portions of the dolerite sill (Photo K. Orth)



Coarse crystals of pyroxene and feldspar in a vein cross cutting the banded upper portions of the dolerite sill (Photo K. Orth)



Grace Cumming and Clive Calver discuss features of the sill in the cliffs towards Mt Brown (Photo J. Halpin)

The walk back took the group via piled angular boulders of dolerite that sat imbricate towards the ocean at the top of the cliffs and in some places on sand and soil. These large rocks have been suggested as tsunami deposits. Another explanation is that they formed by storm action. It seemed hard to imagine on the calm day we had that this is possible some 15 m above the sea, but storm events have been documented where waves easily reached these heights. The Maingon Blowhole would be pumping then!



Group admiring the angular boulders of dolerite forming ridges (Photo by K. Orth)



Imbricate angular boulders here overlying sand and soil (Photo by K. Orth)

The final aside was to a feature on the LIDAR image that Clive wanted to investigate as it was straight enough to be a fault. This fault was a clear feature with raised areas either side. It was suggested as a small displacement strike-slip fault but there was plenty of argument.



Walking the fault (photo by J. Halpin)

Our walk back allowed us to admire the heathland flowering and forming carpets of pink, white and yellow and the surfers who were braving the waves and rocks below. The trip ended back at the car park at 3 pm. Great job Clive Calver for leading, Thanks to Meg Humphrys for the map from her Honours' thesis of the area, Phil for organising all the behind-the-scenes paperwork and the participants for coming along. A special shout out to Alan Chester for coming all the way across the state to join in.

ZEEHAN GEMSHOW 6th November, 2021

While many of us were enjoying the field trip on the Tasman Peninsula, Ralph Bottrill was set up at the Gemshow in Zeehan. This year it was at the Gaiety Theatre and Museum. Looks like there were plenty of people enjoying the exhibitions and maybe even taking home a gem or two, or even a rock dinosaur.



All the photos supplied by R. Bottrill



UPCOMING MEETINGS AND EVENTS

Members are invited to attend the student run student presentations of **Virtual GESSS**. Two hours on 29th and 30th of November (more details in the student section of the newsletter).



Tasmanian Geoscience Forum

2nd of December at Tullah Lakeside Lodge (see last page).

Program in the final stages of compilation. MRT workshop on Wednesday and field trips on Friday and (see details at the back).



COVID19 restrictions means that there are limited places. Get in quickly as it is **nearly at capacity**.

[Tasmania Branch - Geoscience Forum 2021 \(ausimm.com\)](https://ausimm.com)

Accommodation at the venue, Tullah lakeside Lodge is booked out for Thursday night Dec 2nd. Check out the following for potential accommodation options.

Tullah Gateway- 30 Farrell St Tullah 0364734377
Tullah Hideaway, 32 Ardyn St Tullah 0427627443

Tullah Holiday House rentals 2 Meredith St Tullah 0468323424

25 min drive away-Rosebery

Mount Black Lodge- 7 Hospital Rd Rosebery 0428603025

The Top Pub Hotel- 20 Agnes St Rosebery Tas 0364731351

STGST Field Meeting on King Island 8-10th Feb 2022 <https://www.sgtsg.org/>

Don't leave this one too late as the accommodation and spaces are limited. If you want to see the diverse geology of King Island make sure to register soon (see back page).



STUDENTS

SEMESTER 2 AND EXAMS ARE OVER!

Virtual GESSS 2021 will be held online over two 2-hour sessions on the 29 and 30 November.

What is GESSS? Well it is a student run, with all student presentations conference for Earth Sciences.

Presentations will given by earth science students across multiple fields and will be either 10 minutes (8 minutes talk plus 2 minutes Q&A) or 3 minutes (2 minutes talk plus 1 minutes Q&A) each in duration

Time:

1.00pm - 3.00pm AEDT (ACT, NSW, Tas, Vic)
12.30pm - 2.30pm ACDT (SA)
12.00pm - 2.00pm AEST (QLD)
11.30am - 1.30pm ACST (NT)
10.00am - 1.00pm WST (WA)

Support: Virtual GESSS is sponsored by Geoscience Australia

Cost: Students, GSA members and Geoscience Australia staff attend for free. All other members of the public can attend for just \$10.00

Abstract submissions: [Click here](#) to submit before the 31st October. Submissions are open to any **students** conducting research on Earth Sciences, including undergraduates, honours and postgraduates

Keynote Presenters:

Morgan Cox (Curtin University)
Sarah Kachovich (ANU)

Registrations: [Click here](#)



Olivia Wilson (supplied by O. Wilson)

Student Membership

Student members are important to us. Many of you become members through the ‘The Geological Evolution of Tasmania’ book special (see below if you are interested in this). But there are many more benefits to membership. Here are some comments from Olivia Wilson, who completed her Honours last year and is now employed by Entura in Hobart. She was awarded \$1000 from the GSA Endowment Fund for her Honour’s work in 2020 and even managed to get out in the field to spend it!

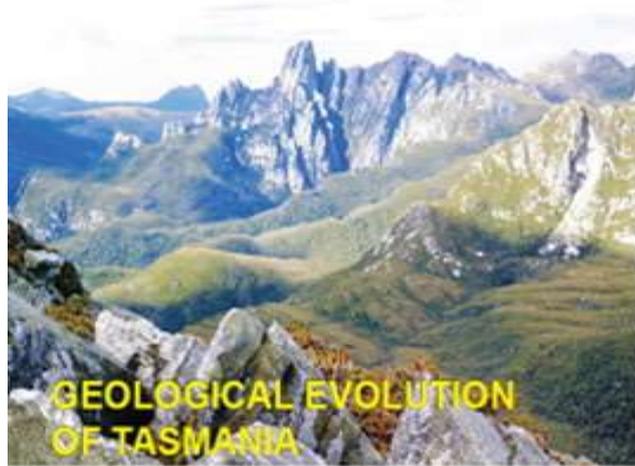
‘Being a student member of the Geological Society of Australia enriched my experience of studying geology. Especially important to me were the opportunities to make connections and learn about the research of other society members. As a student, it is also invaluable to have an environment in which you can interact with geoscientists from all career stages – hearing their experiences allows you to develop your own career aspirations. GSA membership also demonstrates that you have a level of passion and commitment to your field beyond the compulsory courses in your degree, helping your resume stand out as you transition to professional life.’

Student Membership special book deal

There is a special book deal for the Geological Evolution of Tasmania (Special Publication 24 of the GSA) if become a member of the GSA.

You get **one-year free GSA membership** and the book at member prices (\$99). Download and fill out the GSA Membership form from the GSA website. <https://www.gsa.org.au/>

Once lodged you can take a copy to Caroline Mordant (details below) for your book purchase. Any question please contact Membership Officer Rebecca Carey (Rebecca.Carey@utas.edu.au).



The flagship publication of the Tasmanian Division of the GSA, "The Geological Evolution of Tasmania" (Special Publication 24 of the GSA) is available for ordering. All details are available on a specific part of the Utas CODES web site:

http://www.utas.edu.au/_data/assets/pdf_file/0003/55313/Flyer_Order.pdf

Copies of the book can be obtained personally from Caroline Mordant (publications@CODES.utas.edu.au) or phone on +61 3 6226 7537.

Members Price is A\$90 + GST + postage where appropriate. Postage can be avoided by buying in person from Caroline Mordant in Earth Sciences (University of Tasmania). The book is also available at Fullers Bookshop and at TMAG in Hobart, and in the Devonport Bookshop, Devonport. Prices at these sites may vary from GSA prices, and the member price is not available at these sites either.

OTHER EVENTS OF INTEREST

The CODES Geometallurgy short course is running it's first week run online BUT it is split over two separate weeks:

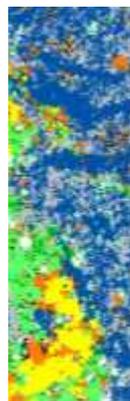
Week One: 18-23 October

Week Two: 15-19 November

The short course is fully online, noting that sessions will be delivered in English via Zoom and occur between 9am – 5pm AEDT (UTC+11).

The flyer for the short course can be found here:

[UTAS Geometallurgy Shortcourse](#)



Industry participants are welcome to take part for the second week or for select days. Contact:

Dr Robert Scott Masters Coordinator,
CODES Private Bag 79, Hobart 7001,
Australia Tel: +61 3 6226 2786 Email:
CODES.Info@utas.edu.au
Robert.Scott@utas.edu.au

Saturday 20th November 2-5pm. 'Science in the Park' at Tolosa Park, Glenorchy. This event was postponed due to bad weather at the end of October. Let's hope for sunshine! There will be guided geology walk along one of the fire trails, lots of science and if weather permits dinosaurs! [Science in the PARK 2021 | Science in the Pub Tasmania \(scipubtas.org.au\)](#)

THE WARATAH MUSEUM 150 YEARS



In the lead up to the 150 years celebration of the Waratah Museum on the **4th and 5th of December**, the local western Tasmanian volunteers are asking for some geological help.

They have many boxes of unlabelled rocks and desperately need some help to label them.

If you can spend some time identifying their specimens, they would be very grateful. Please get in touch with Ruth Gordon at westcoastcabins@yahoo.com.au

Final Words



Supplied by N. Kemp

GSA Tasmania Division Committee

Chair: Dr Karin Orth

Vice Chair: Dr Matthew Ferguson

Secretary: Grace Cumming

Grace.Cumming@stategrowth.tas.gov.au

Treasurer: Dr Andrew McNeill

Committee Members:

Sheree Armistead

Rebecca Carey (Membership)

Acacia Clark (Student Rep)

Jacqueline Halpin

Claire Kain (Geotourism)

Peter McGoldrick

Sebastien Meffre

Indrani Mukherjee (IED)

Phil Sansom (Education)

Geological Society of Australia website:

www.gsa.org

and our own website

<http://www.gsatasmania.org>

Any news, announcements or interesting photographs of Tasmanian Geology you would like to include in the next Newsletter, please send it through via email to karin.orth@utas.edu.au prior to the 15th of December 2021. Anything for the website, facebook or Instagram please send to the team at gsa.tasmania@gmail.com

Tasmanian Geoscience Forum 2021



GSA Tasmania Division, AusIMM and AIG are proud to bring you the

11th Tasmanian Geoscience Forum

WHEN

**Thursday 2nd of December 2021
9AM – 5 PM**

VENUE

**Tullah Lakeside Lodge
Cnr Meredith Street &, Farrell Street Tullah TAS 7321**

**Workshop on Wednesday afternoon run by MRT
and
Two Field Trip options on the Friday 3rd Dec**

**Registrations are open
Please visit the website below for more information**

[Tasmania Branch - Geoscience Forum 2021 \(ausimm.com\)](http://ausimm.com)

Tasmania geoscience data discovery workshop

Mineral Resources Tasmania (MRT) will be running a workshop preceding the Geoscience Forum at the Tullah Lakeside Lodge on Wednesday 1 December from 1pm - 4.30pm.

The workshop will be free, and whilst immediately preceding the GSA/Aus-IMM/AIG geoscience forum, is open to all those who are interested.

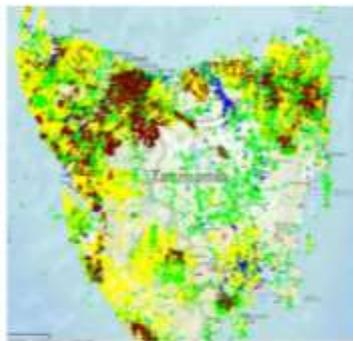
The first part of the workshop will consist of a presentation led by MRT database geologist Kyen Knight:

- An overview of data held by MRT
- How to access the data, what's new and what is under development
- Future directions
- Q&A

The second part will be a hands-on demonstration accessing and analysing this information in a GIS environment, led by MRT geologist and GIS expert Colin Mazengarb.

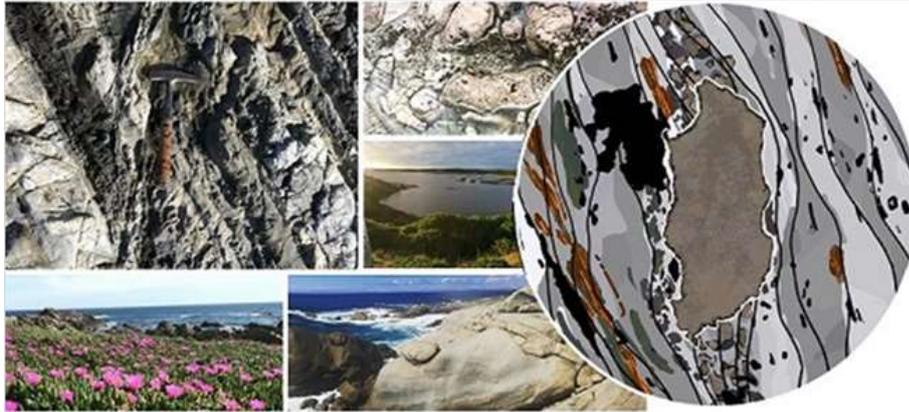
Registrants are encouraged to bring their laptops and be led through a series of data exploration exercises in the open-source QGIS environment.

Registering for the workshop is essential. For further information and to register please contact MRT at info@mrt.tas.gov.au.



Department of State Growth





Specialist Group in
**Tectonics and
Structural
Geology**

Field meeting
"Structure in the Strait"
8-10th Feb 2022
King Island

The SGSTG is holding our biennial meeting 8-10 February 2022 at King Island to discuss the latest research and developments in tectonics and structural geology.

The meeting aims to help geoscientists throughout Australia exchange ideas about their science. The fantastic coastal exposures and the diverse geology will be explored through 3 half day excursions. The meeting is constrained by accommodation and flight availability so it will be small (<60 people) and informal. To make sure that we maximise the number of people that can attend, accommodation and flights have been pre-booked for 30 people and student participation is facilitated through a generous bursary.

We will also run a pre-conference field trip to southern Victoria if there is enough demand.

For more information about the conference, bursary, field trips, registration and abstract submission see: <https://www.sgtsg.org/>

Places are limited so please book early.

Kind regards,
Sebastien Meffre
SGTSG Conference Chair
sebastien.meffre@utas.edu.au

Contact Us

Please email any comments, suggestions or problems with the site to membership@gsa.org.au or write/phone: Suite 8, Front Office, Level 2, 141 Peats Ferry Road, Hornsby, NSW 2077 AUSTRALIA
T: 02 9290 2194 International T: +61 2 9290 2194