

THE G(e)OSSIP

The official newsletter of the Geology Department

29 September 2022 | Issue 15

WELCOME

From **Jerry Dickens**: Welcome to a new Academic Year in the Geology Department at Trinity. With Covid times mostly behind us, we already see a more regular and lively start to this term. Our annual Joly Lecture is back, classes are better attended, and regular Friday gatherings have commenced. Construction and a temporary pavilion will surround our building for the next few years, which will provide some interest and opportunities. But with full return to field courses, some major research projects across the department and some new staff arriving, this year looks good.

We are currently recruiting new members for The G(e)ossip newsletter editorial team. Please email us at geossip.tcd@gmail.com if you'd like to join our team and help bring monthly news to the Geology Department!

The G(e)ossip will be released on the last Thursday of each month. Past issues are archived and uploaded on the Geology website which you can access [here](#).

-The G(e)ossip Team

NEW ADDITIONS

The department is expanding and we are very happy to welcome everyone!

New PhD students:

- Jack Beckwith (Mike Stock)
- Eshbal Geifman (Mike Stock)
- Daniela Vitareli (Emma Tomlinson)
- Eimear Prendergast (Carlos Rocha)
- Conor Smith (Carlos Rocha)
- Kefan Su (Jerry Dickens)

New Postdocs:

- Sina Mousavi (Quentin Crowley) will be starting a two year IRC postdoctoral fellowship co-funded by Geological Survey Ireland under the Enterprise Partnership scheme. Sina is working with Quentin Crowley and the GSI on his project "Quantification of gamma radiation exposure and radon/thoron exhalation rates in representative building materials in Ireland".
- Hilde Koch (Mike Stock) will be starting an 8 year GSI postdoctoral fellowship. It will involve the preparation of geological and environmental samples for the GSI Tellus survey and a diverse range of national and international research projects for XRF analyses. It will also incorporate Hilde's work on the chemostratigraphic establishment of the Irish Midlands using volcanic ash layers and will start new projects that integrate data that are collected as part of the Tellus survey.

Visiting student intern:

- Julien Mathé will be working with Juan Diego's research group for 3 months on rare earth elements uptake by biocarbonates.

The Joly Memorial Lecture is back in person this year. We are delighted to welcome Professor Clive Oppenheimer from the University of Cambridge, who will be giving a talk titled "Listening to Volcanoes". Please join us in the M4 Lecture Theatre (Museum Building) at **1 PM on Friday, 30 September**. Light refreshments will follow.

The poster features a stylized illustration of a volcano erupting with orange lava. In the top left corner, there are two circular logos: 'GEOG SOC' with a globe icon and a fossil skull icon. The main text is centered and reads: 'INTO THE INFERNO DOCUMENTARY SCREENING WITH SPECIAL GUEST PROFESSOR CLIVE OPPENHEIMER 6 PM 29TH SEPTEMBER MUSEUM BUILDING'. At the bottom left is a portrait of Professor Clive Oppenheimer, and at the bottom right is the Netflix documentary poster for 'Into the Inferno' by Werner Herzog, showing a person in a protective suit near a volcano.

In addition to this lecture, Clive will be giving a narrated showing of his Netflix documentary *Into the Inferno* for the Joly/Geography Societies. This event is open to all students/staff and will be at **6 pm on Thursday 29 September**, again in the M4 Lecture Theatre

We have a new Student Board located on the First Floor of the Museum Building! If you would like to be added to the board, please contact **Lydia Whittaker** whittakl@tcd.ie.

Friday socials are back up and running for the School of Natural Sciences. The beer baton has been passed onto **Eimear Prendergast** and **Jack Beckwith**, thanks to **Fay Amstutz** for organising the socials for the past year. If someone would like to be added to the mailing list or join our committee they can email Eimear prendeeci@tcd.ie or Jack beckwitj@tcd.ie.



During the record setting heat wave in the second half of July, **Quentin Crowley** hosted an international summer school as part of the Climate Journey Leadership programme with EIT Climate-KIC and the IKC3 project in Ireland. Thirty-six participants joined the summer school, representing 14 different nationalities: Angola, Czech Republic, Ecuador, Estonia, France, Germany, Ireland, Italy, Latvia, Netherlands, Pakistan, Portugal, Spain and Tunisia. The summer school was attended by undergraduate and postgraduate students, as well as early and mid-

career professionals from a range of disciplines and sectors. Participants developed their own group projects in the following areas: sustainable land use, water resources, food waste, urban mobility, and community climate resilience. Many thanks to all the contributors for their time!

Mike Stock was awarded a Frontiers for the Future Grant, co-funded by SFI and GSI. The project's title is "Developing a process-based understanding of platinum group element mineralisation: a natural laboratory in Ireland (Critical-Ireland)". It'll run over the next four years, with international collaborators from Trinity, UCD, the Geological Survey of Northern Ireland, Cambridge, Camborne School of Mines and Brown University. There are two PhD students on the project (**Jack Beckwith** and **Eshbal Geifman**) plus funding for a postdoc next year.

Blanka Kovacs participated in the 17th Urbino Summer School in Paleoclimatology (USSP) Urbino from July 8 - 20, 2022. She received an ECORD scholarship that made it possible to attend.



Multiple conferences took place over the past few months and many from our department presented both oral and poster presentations!

Goldschmidt 2022 from 10th-15th July in Honolulu, Hawaii, USA



Oral presentations:

- **Dave Chew:** Advances in U-Pb LA-ICP-MS geochronology using high-repetition rate, low-dispersion laser ablation cells
- **Maurice Brodbeck:** Complex Metal(loid) Deposition in Porphyry Ore Sulphides - Insights from LA-ICP-MS Mapping

Poster presentations and flash talks:

- **Foteini Drakou:** Refining Paragenetic Series for Complexly Deformed VMS: Implications for Metal Deposition at the Caribou Zn-Pb-Ag Mine, Bathurst Mining Camp, Canada
- **Hilde Koch:** Characterisation of Irish volcanic ash layers using combined in-situ U-Pb and Lu-Hf analyses of zircon and/or apatite and its implication for the growth rate of the Waulsortian reef
- **Niamh Faulkner:** Crystallisation of CaCO_3 from multicomponent solutions

7th European Conference of Crystal Growth

from 25th-27th July in Paris, France

Oral presentations:

- **Adri Szucs:** Crystallisation pathways towards bastnäsite: the role of dolomite and aragonite in the formation of rare earth carbonates (*Won award for talk - Acta Cryst. B Prize awarded by The International Union of Crystallography for The Best Oral Presentation from an Early-Career Researcher)
- **Remi Rateau** - Adsorption processes of rare earths by biogenic carbonates

Poster presentations:

- **Niamh Faulkner** - Inhibition effects of multicomponent solutions on CaCO_3 crystallisation



11th International Congress on the Jurassic System from 29th August - 2nd September in Budapest, Hungary

Oral presentations:

- Fossil leaf mercury (Hg) analyses provide insight on Early Jurassic atmospheric concentrations and LIP volcanism (**Emma Blanka Kovács***, Micha Ruhl, Jennifer McElwain)
- Reduced plate motion controlled timing of Early Jurassic Karoo-Ferrar Large Igneous Province volcanism (**Micha Ruhl***, Stephen p. Hesselbo, Hugh C. Jenkyns, Weimu Xu, Ricardo L. Silva, Kra J. Matthews, Tamsin A. Mather, Conall Mac Niocaill, James B. Riding)

Poster presentations:

- Depositional controls on Toarcian mercury sequestration (Réka Valley section, Mecsek, SW Hungary) (**Emma Blanka Kovács***, Micha Ruhl, József Pálffy, Zsófia Rita Horváth-Kostka, Zoltán Kovács, Tamás Müller, Wolfgang Ruebsam)

Panel discussion:

- Everything you always wanted to know about the Jurassic but were afraid to ask (Angela Coe, Grzegorz Pieńkowski, David Kemp, Guenter Schweigert, Aisha Al Suwaidi, Atsushi Matsuoka, **Emma Blanka Kovács**)



UK Coasts and Sea Level Meeting from 20th-23rd September in Durham

Zoe Roseby and **Fermin Alvarez** attended the UK Coasts and Sea Level Meeting, held at Durham University Geography Department.

Fermin gave an oral presentation about the surface distribution of modern intertidal salt marsh foraminifera along the south coast of Ireland.

Zoe presented her research related to relative sea-level rise in Dublin over the last two centuries, reconstructed by geological tide gauge.

Culture Night

The Geological Museum opened its doors for [Culture Night](#) on Friday 23rd, for The 'Story of the Earth' exhibition.

The exhibition highlights the geological evolution of the planet, with displays of rocks, minerals and fossils. The event was well attended until 10 PM.

(**Luca Terribili** pictured right holding carbonate specimens)



iGEO 2024

Following the success of iGEO 2022 in Cork, iGEO is coming back in 2024! If you're interested in getting involved with the committee email irishgeo2022@gmail.com

A colorful promotional poster for iGEO 2024. The top left features the iGEO 2024 logo with a globe icon and the text 'Geology, Environmental & Ocean Sciences Early Career Research Symposium'. The top right shows two circular inset photos: one of people sitting at a table in a social setting, and another of a group of people wearing hard hats in a field. The center has a large white banner with the text 'JOIN THE COMMITTEE!!' and three white arrows pointing towards it. The bottom left has a list of benefits on an orange sticky note: 'Best way to build your network!!', 'It is fun and exciting!', 'Learn new skills!', and 'It will make your CV shine!!'. The bottom center has a circular badge that says 'JOIN US NOW' and 'MON SUN NIOS'. The bottom right has a thought bubble with the word 'Interested?' and the email address 'irishgeo2022@gmail.com'. At the very bottom, there is a website URL 'https://igeo2022.wordpress.com', a hashtag '#iGEO2022', and social media icons for Twitter, LinkedIn, Instagram, Facebook, and the handle '@iGEOECS'.

Seminars & Webinars

Friday brown bag lectures are back. Please check your email for the circulated schedule. Email **Elliot Carter** at elcarter@tcd.ie if you have any questions.

12 October at 7 PM: IGA lecture by Charlie Woodrow on the sounds of Mesozoic insects. Register [here](#).

The Dublin Magmatism Group is a new group whose aim is to bring researchers in Trinity together to discuss shared interests in volcanic and magmatic processes. The group is intended to be completely informal and just promote discussion/support/collaboration. A timetable for the rest of this term is below:

- **Wednesday 12 October, 13.00-14.00:** Lunch seminar (Museum Building, GGSR-A) - Elliot Carter
- **Wednesday 26 October, 17.00:** Pub trip (Kennedy's, Westland Row)
- **Wednesday 9 November, 13.00-14.00:** Lunch seminar (Museum Building, GGSR-A) - Lucy Blennerhassett
- **Wednesday 23 November, 17.00:** Pub trip (The Ginger Man, Fenian St)

Social Media

The School of Natural Sciences and all departments are on Twitter. Give them a follow and stay up-to-date on everything happening in SNS!

School of Natural Sciences - [@TCD_NatSci](#)

Geology - [@TCDOnTheRocks](#)

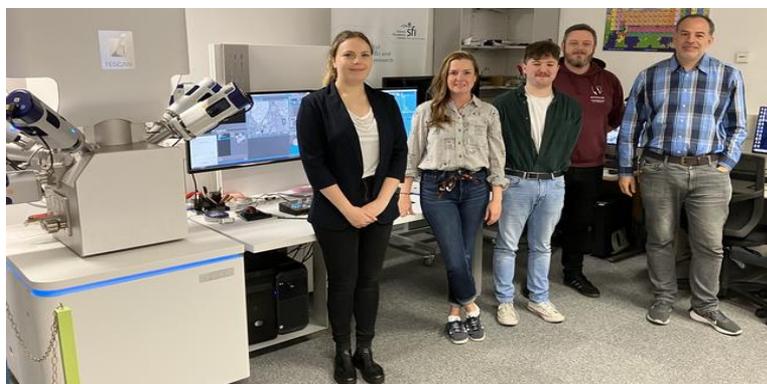
Geography - [@TCD_Geography](#)

Botany - [@TCBotanicGarden](#)

Zoology - [@TCDZoology](#)

Publications

- **Adrienn Maria Szucs, Melanie Maddin, Daniel Brien, Paul C. Guyett and Juan Diego Rodriguez-Blanco** (2022) Targeted Crystallization of Rare Earth Carbonate Polymorphs at Hydrothermal Conditions via Mineral Replacement Reactions', Global Challenges, [DOI](#) [REEsearch group news article [here](#)]



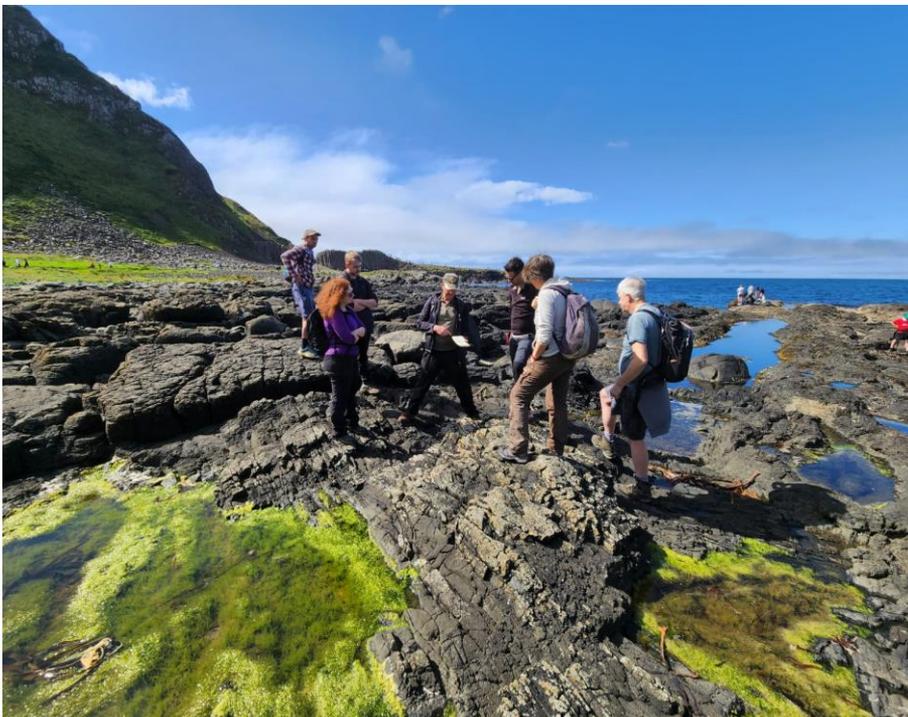
- **Micha Ruhl et al.** (2022) Reduced plate motion controlled timing of Early Jurassic Karoo-Ferrar large igneous province volcanism. [DOI](#)
- **Maurice Brodbeck; Sean McClenaghan;** B. Kamber; P. B. Redmond (2022) Metal(loid) Depletion in Sulfides from the High-Grade Core of the Bingham Canyon Porphyry Cu-Mo-Au Deposit, Utah. [DOI](#)
- **Meabh Hughes et. al.** (2022) Using geogenic radon potential to assess radon priority area designation, a case study around Castleisland, Co. Kerry, Ireland. [DOI](#)

Prince Edward Island - June 2022

With the goal of reconstructing relative sea-level change in the west coast of the North Atlantic, **Robin Edwards, Zoe Roseby & Fermin Alvarez** carried out a two-week field trip to Prince Edward Island (Canada) in June 2022. It was a collaborative trip, including researchers from Tufts University, Maynooth University, University of North Carolina and Woods Hole Oceanographic Institution. We collected surface sediments and sediment cores from several salt marshes that are now being processed at TCD.

**Critical Ireland field trip - August 2022**

Mike Stock led a group from Ireland, including **Dave Chew, Jack Beckwith** and **Eshbal Geifman**, the UK and US for a week touring around Northern Ireland and Louth, looking at Palaeogene igneous rocks.



New Fourier-transform infrared spectroscopy (FTIR)



A new FTIR has been purchased for the School of Natural Sciences thanks to the generosity of Geological Survey Ireland via the Equipment Call 2021. The FTIR can obtain infrared spectra of solid and liquid samples in a matter of minutes. It only requires a very small amount of material to obtain meaningful information. Sample preparation is non-destructive, very easy – in some cases even unnecessary. This instrument will strongly support your research in the School of Natural Sciences, across diverse areas of research. The instrument is located in the Earth Surface Research Laboratory (Unit 6b, Trinity Technology & Enterprise Centre; TTEC). Contact information can be found [here](#).

STUDENT RESOURCES

Mental Health Matters

TCD's Student Counselling Services is open and available to all registered students.

Check out their website to read about the services they provide [here](#), email them at student-counselling@tcd.ie to request an appointment, and follow them on Instagram at [@tcd_headspace](#) for mindfulness and mental health awareness tips.

Postgrad Student Support

Learn more on the PG Grad Chats [webpage](#) and pre-register [here](#).

GRAD CHATS
FOR ALL POSTGRADUATE STUDENTS

To equip students with the skills to manage stress, work-life balance, increase self-care practices, communication and assertiveness skills, and look at how best to negotiate the supervisory relationship

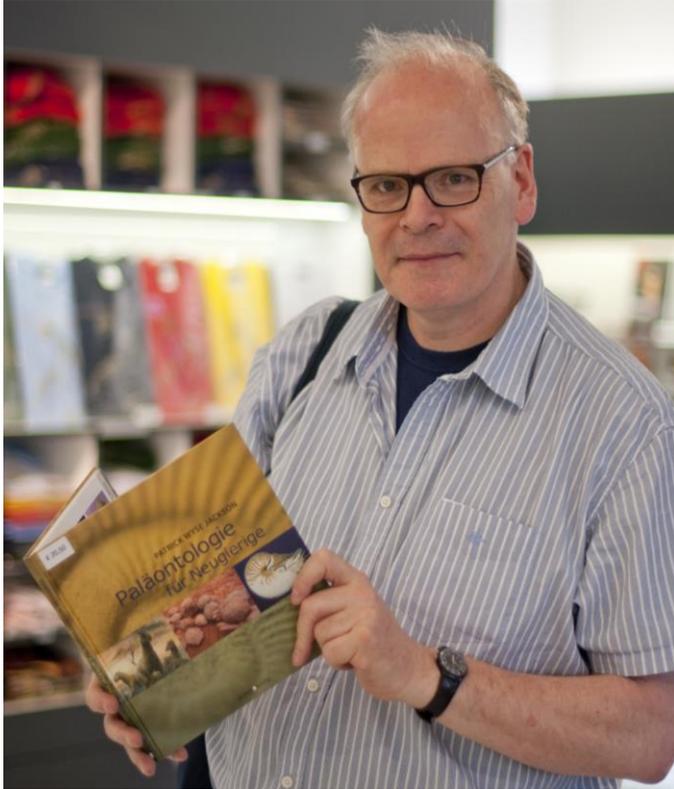
Mondays from 2pm – 3.10pm in-person at the Student Counselling Service offices (3rd floor, 7-9 Leinster Street South, Dublin 2)

With: Tom Adams (SCS) and Martin McAndrew (Postgraduate Advisory Service)

Scan me to sign up

STAFF CHANGES

Whilst welcoming new people to the department, we are sad to say farewell to **Mary Foody**. Mary has just retired after a long career in Trinity. Since 2005 when it was established, Mary has been the School Administrative Manager of the School of Natural Sciences. Prior to this she worked as an administrator in Botany, Geology and in St James's Hospital. Without doubt Mary has been the person within the School to whom we all turned to for cheerful wise advice and assistance. She has overseen a significant increase in staffing, teaching and student numbers, to say nothing of her involvement in the E3 Learning Foundry project. She will be greatly missed, and we all wish her a wonderful retirement.



Patrick Wyse Jackson has stepped down as Head of School, but is continuing to teach and doesn't plan to retire for many years! Patrick considers himself lucky to have worked in the Discipline of Geology and the Museum Building for many years, and where he has been able to research subjects as diverse as Paleozoic bryozoans, the history of geology especially in Ireland, and the use of stone in the Irish built environment.

Born in Cashel, Co. Tipperary, Patrick became captivated by geology while at school and entered Trinity in 1980 determined to continue his studies in the subject. After an eventful undergraduate career which included playing for the College 4ths Hockey team (the worst at the time in Leinster) he graduated and embarked on a secondary school career. It lasted only 2 years (!) after which he returned to Trinity and began a PhD on Mississippian bryozoans from Co.

Fermanagh under the supervision of Charles Holland and later George Sevastopulo. He was appointed Curator and Librarian in 1988 and subsequently became a Lecturer and then Associate Professor. He served as Head of Discipline for a short while before becoming Head of School in 2017 and is now delighted to have passed this role on.

He is especially interested in the palaeobiology, taxonomy and functional morphology of Paleozoic bryozoans for which he received a PhD (1992) and ScD (2017), and about which he has published extensively with colleagues in the US and Europe. He is currently working on a revision of the volume on the distinctive Fenestrate bryozoans for the Treatise on Invertebrate Paleontology series. Scientific biography has always fascinated him and has written short pieces on many Irish geologists and hopes to finish a biography of John Joly. More recently he has worked with Trinity colleagues Louise Caulfield and Una Farrell on a database of Irish dimension and decorative stone for the project Stonebuilt Ireland funded by the IRC, OPW and GSI. His books include *The Chronologers Quest* (2006) that concerns the age of the Earth, and the more recent lavish volume on the Museum Building (2019), co-edited with Christine Casey of the Discipline of the History of Art and Architecture. He was elected a Fellow of the College in 2006 and a Member of the Royal Irish Academy this year.

As Curator of the Geological Museum, he has worked with schools, NGOs, and the general public and enjoys outreach activities and hopes to see a new Geological Gallery installed in the Museum Building soon. For relaxation he enjoys reading American history prior to 1900, writing, travelling especially to the eastern US, walking a particular beach in Kerry, and sometimes just watching bad movies with a cat on his lap. He is grateful for not owning a mobile phone.

FAREWELLS

We are sad to say goodbye to the last two remaining original G(e)ossip team members, **Erica Krueger** and **Niamh Faulkner**. Erica and Niamh are leaving us to focus on the final projects of their PhDs and they will be sadly missed by the rest of the newsletter team. We thank them for the hard work and dedication they've put into The G(e)ossip since its very first issue in March 2021 and we wish them all the best on completing their PhDs! You can follow along with their research (and their Legos) on Twitter at [@etk89](https://twitter.com/etk89) and [@niamhflknr_geo](https://twitter.com/niamhflknr_geo).

