

European Association of Geochemistry



Audience at

Survey of

Slovenia

the Geological

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KAREN HUDSON-EDWARDS' 2019 EAG DISTINGUISHED LECTURER TOUR



Audience for the first lecture at Babes-Bolyai University, Cluj-Napoca (Romania).



Questions?

Last slide of the "Environmental Minerals" lecture at the Institute of Geological Sciences, Jagiellonian University, Kraków (Poland).

three of my lectures to an enthusiastic audience, followed by a lively lunch with Mateja's group and colleagues at a restaurant that served traditional Slovenian food. That evening, Mateja showed me around the city, mainly along both banks of the Ljubljanica River, and we enjoyed some excellent Slovenian red wine with further discussions on mining, geochemistry and life.

The next day I moved on to Kraków (Poland) to visit the Institute of Geological Sciences at the Jagiellonian University. That evening, my host, Marek Michalik, and his wife Anna, took me for an excellent dinner at the Barka restaurant, a

moored barge serving Polish cuisine on the Vistula River. The next day, I gave Lectures (2) and (3) to students and staff and was given a tour of the institute. It was good to get an overview of the geology from the roof of the building, and to learn about the importance of coal mining in Silesia. In the afternoon, Marek and Anna took me for lunch in a wonderful underground 'cave' restaurant in the middle of Kraków, after which I was able to tour the city and view the stunning Renaissance Cloth Hall and other buildings around the main market square.

The tour began again in early January 2020 with my postponed trip to Charles University in Prague. My host, Vojtěch Ettler, who has similar research interests to me on the environmental behaviour of mineral wastes, picked me up at the airport and took me into town. After a tour of the department and introductions to staff and students, I delivered Lecture (3) on environmental minerals. Subsequently, we had a good discussion about the role of minerals in mining systems and the human body. That night, Vojtěch, his colleagues and I went for Czech roast duck and Pilsner beer, and had a very jolly evening discussing minerals, universities and humorous incidents.

I am very grateful to the EAG, especially to Marie-Aude Hulshoff who helped organise my trip, to my hosts and to all the people who attended the lectures. This was a fantastic experience for me, and I hope also for those who came to listen and to those who I spoke with afterwards. I felt we had good opportunities for exchange of information and experiences in mining and geochemistry, and we have formed collaborations that will go forward into the future.

Karen Hudson-Edwards (University of Exeter, UK)

View the lectures from the 2019 Distinguished lecture tour at http://eag.eu.com/outreach/dlp/.

I was surprised, and very honoured, to receive notification that I had been named the EAG's Distinguished Lecturer for 2019. I am a geologist by training and worked as an exploration geologist for five years between my MSc and PhD before moving on to study the environmental impacts of mining. For over 25 years, I have worked in this field, collaborating with excellent colleagues, post-docs and students. Together, we have explored many facets of this field, including the environmental minerals of mine wastes, the mediumand long-term impacts of tailings dam spills, the influence of mining on global geochemical cycles and human health, the management and remediation of mine wastes and the promotion of sustainable mining practices. I was very excited to be able to communicate

this science to geochemical audiences in central and eastern Europe. I proposed three lectures that interested groups could choose from: (1) "The What, Where, How and Why of Mine Tailings", (2) "The Global Biogeochemical and Health Impacts of Mining" and (3) "Environmental Minerals: Bacteria, Fungi, Worms, Toxins and the Human Body".

Shortly before embarking on my tour I broke my ankle in a freak accident, just as last year's EAG Distinguished Lecturer, Jim McQuaid, did! Hopefully, this isn't a new trend for the EAG and that the 2020 recipient will be fine. I had to move what was to be my first lecture, at Charles University in Prague (Czech Republic), to January 2020 while I got literally back on my feet. My first lecture was, therefore, at Babes-Bolyai University in Cluj-Napoca (Romania) in the last week of November 2019. I had an extra day in Cluj, so my host, Calin Baciu, showed me around the city and took me on a tour of the Salina Turda former salt mine, advertised as "A Gate to Transylvania's Heart". I had never been underground in a salt mine before, so it was fascinating to see the beautiful flow structures and delicate stalactites. The following day I gave Lectures (1) and (2) to an audience of students and staff. It was great to speak to students afterwards and hear about the miningrelated, and other, research that they were involved in. I received good questions on tailings, the future of sustainable mining, and whether or not acid mine drainage could ever be completely stopped.

My next stop was the Geological Survey of Slovenia in Ljubljana. My host, Mateja Gosar, picked me up from the airport, and we had a delicious lunch and discussed all things geochemistry. In the afternoon, Mateja had arranged for her group to give presentations on their research projects, many of which focused on aspects of legacy mining in Slovenia. I was also able to hear about the group's many years of work on the geochemistry of the area around the former Idrija mercury mine in the west part of the country. The next morning I gave all

Invite the 2020 Distinguished Lecturer to Your Institute

Dr Juan Diego Rodriguez-Blanco (Trinity College Dublin, Ireland) has been selected as the 2020 Distinguished Lecturer. He will deliver a series of lectures on the theme of environmental mineralogy and crystallisation on his tour this autumn. If you are based in central or eastern Europe and would like to invite Juan Diego to talk at your institute, please contact the EAG Office (office@ eag.eu.com).

CHANGES TO THE GEOCHEMICAL PERSPECTIVES LETTERS EDITORIAL BOARD

The *Geochemical Perspectives Letters* editorial board are very pleased to welcome two new prestigious scientists to the team.

Anat Shahar is a staff scientist at the Geophysical Laboratory at the Carnegie Institution for Science (Washington DC, USA). Her research focuses on understanding how stable isotopes can inform our understanding of the processes that brought about the origin of the solar system and the processes that govern planetary formation, differentiation, and evolution.

Gavin Foster is Professor of Isotope Geochemistry within the Ocean and Earth Science, National Oceanography Centre Southampton at the University of Southampton (UK). He uses boron and other elements to reconstruct past climates so as to better understand our future climate.

The board would also like to take this opportunity to thank departing editors **Ariel Anbar** and **Wendy Mao** for their hard work and their immense contributions to the success of the journal.



'LAB CORNER': REPURPOSING EVERYDAY ITEMS FOR GEOCHEMISTRY

For the EAG's new 'Lab Corner' section, we asked the community: "What everyday item or household tool have you repurposed for science?" Read our first contributions below, and if you have any tips or tricks of your own that you'd like to share here in *Elements* or on the EAG Blogosphere, send them to us at office@eag.eu.com!

Making It Up With Make-Up



Fluorphlogopite powder. Photo credit: Filippo Formoso

"A few months ago, we found ourselves in dire need of a standard material for referencing our solid-state nuclear magnetic spectroscopy data. In short, we needed a mineral with defined magnesium– fluorine bonds, and it turned

out that the perfect compound for this task was fluorphlogopite, a fluorine-endmember mica. However, the price from some wellknown chemical companies was more than £1,000 per gram. We then discovered, after a simple session on the internet, that fluorphlogopite is used in beauty products, such as skin foundation power, because it provides a supreme gloss (it's a really shiny mineral). Fortuitously, some companies sell fluorphlogopite powder as a raw material with a price of roughly £2 for 25 grams. So far, this material is a wonderful standard compared with analyticalgrade reference materials, and, as a bonus, our hands look amazing after handling it."

> Filippo Formoso, PhD student, University of St Andrews (UK)

> > Cryoconite hole. PHOTO CREDIT: KLEMENS WEISLEITNER "Many biologists who have prepared microscope slides for imaging

> > will know that a little

nail varnish is a cheap and effective sealant to

preserve your specimen underneath the cover

glass. However, perhaps

Culinary Tricks in The Cryosphere?



few people outside of the relatively niche glacier microbiology community know the secret culinary trick to sampling a cryoconite hole (surface melt-holes on a glacier). Amongst the pipettes and crampons in our packs, you'll often find a turkey baster – which turns out to be a very effective tool for extracting liquid and sediment from these small icy melt pools that are refugia for microorganisms."

James Bradley, Queen Mary University of London (UK)

ELEMENTS