



European Association of Geochemistry



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THE GREAT EASTERN



Alex Anesio in Kiev (Ukraine)

I had the good fortune to be part of the 2016 EAG Distinguished Lecture Program. My research interests lie at the interface between chemistry and biology, and I have always enjoyed interacting with researchers from these disciplines. I am a biologist by training but work on the biogeochemical processes of cold environments. Sometimes, I use biological techniques and sometimes more chemically-oriented approaches to determine the magnitude of carbon and nutrient cycling on glaciers. The EAG lecture tour was an excellent opportunity to interact across the disciplines, and I went to institutes that focus on geochemistry – Kiev (Ukraine) and Krakow (Poland) – or on biology/microbiology – Bucharest (Romania) and Ljubljana (Slovenia). At each place, my goal was to engage microbiologists with geochemists. On top of that, it was a great opportunity for me to see a side of Europe that has a rich history. The airline gods were certainly in favour of the tour. Travelling back and forth between four different destinations in 9 days meant boarding 10 different planes and using 5 different airline companies in a short period of time. Except for one harmless small delay between Belgrade and Ljubljana, every single flight was bang on time, making the whole trip really smooth.



The attentive audience at the Institute of Biology, Romanian Academy

My first lecture, which was on a Friday, was at the M.P. Semenenko Institute of Geochemistry, Mineralogy and Ore Formation, which is part of the National Academy of Science of Ukraine in Kiev. This was my first chance to calibrate the talk to ensure that an audience of (mostly) geochemists would enjoy some microbiology. Based on the number of questions asked and interest shown, I thought the tour started well. After the lecture, I had a very nice time learning about rocks and the projects running at the institute. First, there was a tour at the institute's Natural History Museum, which had one of the most amazing and complete mammoths I have ever seen, as well as a wide range of rocks and minerals. Thereafter, PhD student Tatiana Ilchenko took me for a tour of Kiev's city centre, and I learned a great deal about Ukrainian Orthodox churches. It was my first time in Kiev, and I found it very impressive.

Saturday morning, I flew to Bucharest via Warsaw. I was to stay in Bucharest until Tuesday, so I was quite excited at the chance to be a tourist here. Dr. Cristina Purcarea and her PhD student Antonio Mondini took me to a variety of places and every place just made me more and more dazzled. I was simply speechless during my visit to the Palace of the Parliament, and I enjoyed some amazing food, too.



Ljubljana, Slovenia

On Monday, it was time to give two lectures in the Institute of Biology Bucharest, which is part of the Romanian Academy Bucharest. There was a very enthusiastic audience, and we had a great and lively discussion throughout the morning and afternoon. I am very grateful for the gift from Cristina, which included a T-shirt with my favourite book character, Dracula.

Come Tuesday it was time to go to Ljubljana, via Belgrade, where Prof. Nina Gunde-Cimerman and PhD student Laura Perini took excellent care of me. I had an absolutely great Slovenian meal, including some very delicate frog meat. The talk was in the Department of Biology at the University of Ljubljana and a nice mix of academic staff and undergraduate students were in attendance. We had some very good discussions about the role of fungal communities in cold environments. This is still an understudied biological component of glaciers and is a topic that Prof. Gunde-Cimerman's lab is doing exciting work on.

On Thursday and Friday, I spent time in Krakow at the Institute of Geological Sciences, Jagiellonian University, hosted by Prof. Marek Michalik and Dr. Monika Kasina and a PhD student. In attendance were academics and students working on the interface between geochemistry and biogeochemistry, resulting in really interesting discussions about the role of microbes on rock weathering. Krakow is a vibrant city with around 100,000 students across several universities; there are beautiful historic places and lots of nice people. Krakow is one of the oldest cities in Poland: if you visit, do not miss the castle and the Jagiellonian University's museum.

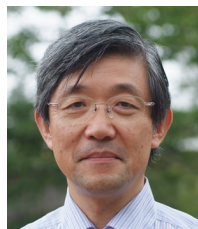
Because I work in the UK during a period of so much debate created by Brexit, I could hardly stop thinking about the impact that the European Union (EU) has had on collaborative research across Europe and, in particular, on the societies and economies of Eastern European countries. I am trying to be neutral, but it was impossible not to notice what Slovenia and Romania have gained by their membership of the EU, what Ukraine might gain from membership, and what the UK will lose from leaving.

The young generation in the places I visited are full of hope and are enthusiastic about their work. I am extremely grateful to all my hosts for making my tour so enjoyable and stimulating. I would like to say a special "thank you" to the young generation of postdocs and PhD students who took such excellent care of me. They are not only nice young people but also very bright rising stars who are doing extremely interesting work in geochemistry/microbiology. Special thanks to Tatiana, Antonio, Laura and Monika. I must also thank Marie-Aude Hulshoff for all her hard work in sorting the practicalities out. Last but not least, I thank the EAG for giving me this once-in-a-lifetime opportunity.

Alexandre Anesio (University of Bristol)

Videos of the lectures 'Biogeochemical Cycles and Microbial Processes in Icy Habitats' and 'The Interplay between Weathering and Microbes during Soil Formation' are available at www.eag.eu.com/outreach/dlp.

2017 EAG AWARDS

Urey Award to Eiji Ohtani

Eiji Ohtani (Tohoku University, Japan) is an outstanding academic who has mastered deep-earth geochemistry, mineralogy, and mineral physics. Eiji pioneered melting experiments of mantle silicates to pressures above 20 GPa. Since then, Eiji's research has clarified three main themes: (1) The melting behavior of Earth and planetary materials and the properties of melts at high pressures and temperatures; (2) The global circulation of water and other volatiles in Earth's interior; (3) The geochemistry, mineralogy and physical properties of Earth's mantle, core and core-mantle boundary. This body of work has revolutionized our understanding of the interior dynamics and early evolution of the Earth and other terrestrial planets. Eiji is known as a very modest man, but by awarding him the 2017 Urey Medal, the EAG recognizes that he has nothing to be modest about.

Heinz Lowenstam Science Innovation Award to Bo Thamdrup

Bo Thamdrup (University of Southern Denmark) has made outstanding contributions to the field of aquatic biogeochemistry, significantly advancing our understanding of the nature and dynamics of the microbial cycling of elements in sediments and in the water column. Bo, together with Kai Finster (University of Aarhus, Denmark), discovered a completely new mode of microbial life characterized by elemental sulfur disproportionation. This process is active in settings that

support sulfide oxidation and can profoundly influence the isotopic composition of sulfide in sediments. In other seminal work, Bo unraveled the dynamics of iron cycling in aquatic sediments, and, in particular, the processes that control iron reduction. Finally, Bo, together with Tage Dalsgaard (University of Aarhus) was the first to describe the microbial process of anaerobic ammonium oxidation (anammox) in the environment. Bo and his colleagues then quantified anammox as a globally significant process in the nitrogen cycle, completely rewriting the textbooks on the environmental cycling of nitrogen.

Houtermans Award to Julie Prytulak

Julie Prytulak is a lecturer at Imperial College London (UK) and could be described as a force of nature. She has breathed life (and profanities) into isotope geochemistry across the globe. Julie is the scourge of bad data and a beacon of laboratory rigour. An exceptional analyst, Julie has mastered two of the most challenging isotopic measurements in the game: the abundances of ^{231}Pa and ^{50}V . Both these isotopes are barely sufficient to count as naturally occurring, yet Julie has

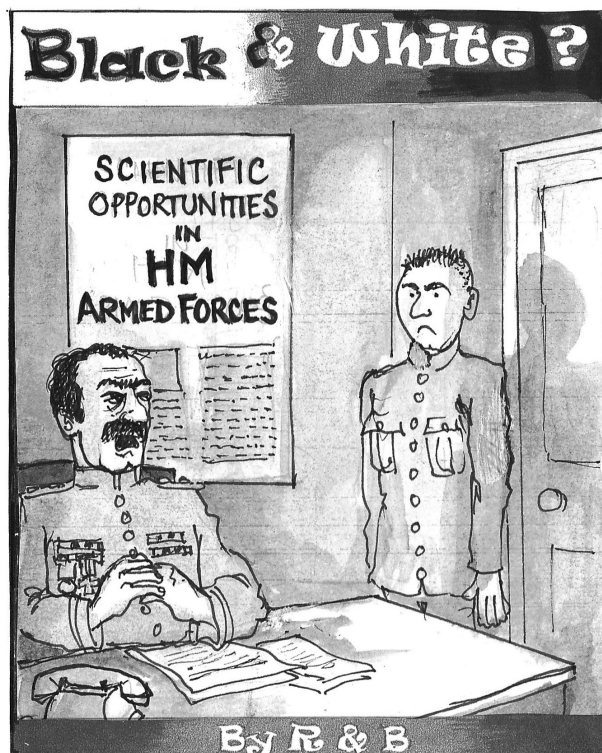
managed to measure both at high enough precision to be derive information on mantle melting and its redox state. This work not only showcased her consummate isotope measuring abilities but also her innovative applications of this hard-won data. Julie has seized the opportunity of plasma mass-spectrometry to tackle challenging geological problems. She is a fitting recipient of the 2017 Houtermans Medal.



Early registration: 13 June
Pre-registration: 13 July

GOLDSCHMIDT® 2017
13–18 August 2017
Paris, France

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Your job is to take fresh soil samples while
the bomb disposal team digs out the IED.