



European Association of Geochemistry



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2018 EAG AWARDS

Urey Award to Susan L. Brantley



Sue Brantley (Pennsylvania State University, USA) has developed exceptional insight into the physico-chemical processes that operate at the Earth's surface. Sue has ventured from her background in low-temperature aqueous geochemical kinetics into numerous other disciplines: geomorphology, microbiology, and geophysics. Her work on the time-scale dependence of mineral dissolution rates and of how weathering fronts advance have provided fundamental insights into

the functioning of the weathering zone. Sue has written numerous book chapters and initiated the US NSF National Program of Critical Zone Observatories, which is a network of observatories that study the critical zone across the US. She is one of those few outstanding geochemists who have initiated a field of substantial size and significance.

Shackleton Science Innovation Award to Jess Adkins



Jess F. Adkins, Professor of Geochemistry and Global Environmental Science at the California Institute of Technology (Caltech; USA), has been awarded the 2018 Science Innovation Award, Shackleton Medal. Jess was awarded the medal for pioneering the field of deep-sea coral paleoceanography (which has helped us to understand the role of deep ocean in climate change and abrupt climate change) and for major contributions to our understanding of the controls on ocean

salinity at glacial-interglacial timescales, the controls on precipitation and dissolution of biogenic carbonates, and the effect of sulfide weathering on atmospheric carbon dioxide concentrations. With these accomplishments and his ongoing research, Adkins truly follows in the footsteps of Sir Nicholas Shackleton.

Houtermans Award to Morgan Schaller



Currently an assistant professor at Rensselaer Polytechnic Institute (New York, USA), Morgan Schaller is a geochemist, stratigrapher, and sedimentologist who specializes in stable isotope research and vapor inclusion analysis in relation to deep-time atmospheric gas variations. He is best known for documenting major changes in atmospheric CO₂ through 32 million years of the Early Mesozoic, including CO₂ changes associated with the weathering of Triassic-Jurassic basalts,

and, most recently, his discovery of impact spherules at the Paleocene-Eocene boundary, which he reported in *Science* and for which the Houtermans award has been bestowed. Dr. Schaller received his bachelors degree in geology and biology in 2005 from Binghamton University (New York, USA), his MS in hydrogeology, and his PhD in geochemistry in 2012 from Rutgers University (New Jersey, USA).

KNOW OF ANY DESERVING SCIENTISTS?

Nominate them for one of the 2019 EAG awards by 15 November 2018 at <http://www.eag.eu.com/awards/nomination/>.

2017 EAG-GS OUTREACH PROGRAM TO AFRICA

As part of the 2017 EAG-GS Outreach Program to Africa, I [Alex Hofmann] travelled to Earth science departments in Ghana, Ethiopia, Tanzania, and Nigeria to give a three-day short course with the title Early Earth Life and Mineral Systems. The course explored the relationship between surface processes, the evolution of life, and the formation of mineral deposits on the early Earth. Africa has a rich record of Archaean geology, and I aimed to outline some of the geochronological and geochemical tools available to tap into this record. Beside promoting geochemistry in Africa, a more personal goal of the course was aimed at intensifying Pan-African collaboration – I myself am based in Africa, at the University of Johannesburg (South Africa).



Artisanal mining for quartz vein-hosted gold in northern Ghana.

In April, I visited the University of Ghana, where I received a warm welcome from Profs. Mark Yidana, Prosper Nude, and Frank Nyame, who looked after me during the three days of lectures in the geology department. During joint lunches we had general discussions on African geology, options of support of scientific research and student bursaries, and the accessibility of analytical facilities. The course was attended by ~50 students and staff members from the department. Supervising a Ghanaian PhD student myself, I used the occasion to visit his project area in the northern part of the country after the course. The project is centred on gold mineralization, one of the most important commodities for man in early Earth rocks.



Main entrance to the University of Addis Ababa (Ethiopia).

For November, I had planned to visit Nigeria, but the university teaching calendar had to be re-adjusted due to countrywide strike action by academic staff. As a result, at the end of November I travelled to Tanzania instead, with a stop-over in Ethiopia. Earlier attempts to



At the University of Dar-es-Salaam (Tanzania). Drinks and snacks kindly provided by the Tanzania Geological Society.

contact the geology department at the University of Nairobi in Kenya fell on deaf ears, possibly because of student unrest at the time. Staying five days in Addis Ababa (Ethiopia) was a pleasant experience due to blue skies, cool air, and Ethiopian hospitality at the university, which had been arranged by Profs. Dereje Ayalew and Gezahegn Yirgu. A group of ~15 postgraduate students attended the course, which was a sizeable number when keeping in mind that Ethiopia's basement rocks are mainly Neoproterozoic in age. The following week was spent at the University of Dar-es-Salaam (Tanzania), where ~35 postgraduate students and members of the Tanzania Geological Society (TGS) followed the course. Because of the abundance of Archaean rocks in the Tanzanian craton, there were some lively discussions on early Earth processes. Drs. Elisante Mshiu, Ernest Mulaya, and Emmanuel Kazimoto hosted me, and the TGS sponsored refreshments and a joint lunch. Thank you all. Being in Tanzania in December, I used the opportunity to travel around the country for a year-end holiday, trying to avoid as much as possible the rather pricey national parks.



Token of appreciation presented by Juliet Akoh, University of Lagos (Nigeria).

In January, teaching in Nigeria was back to normal, so I decided to complete my lecture tour by visiting the universities of Zaria, Ibadan, and Lagos. Thanks to Profs Tavershima Najime (Ahmadu Bello University, Zaria), Olugbenga Ehinola (University of Ibadan), and Samuel Olobaniyi (University of Lagos) for arranging for my tour. A diverse mix of ~40 postgraduate students and staff, coming from as far as Kano, attended in Zaria, well known for its ancient walled town and Precambrian basement geology. The Zaria university campus is surrounded by peaceful agricultural land and, therefore, far away from the hustle-and-bustle commonly encountered in Nigerian cities. Thanks to Harmattan winds, the weather was pleasant, albeit too cool for residents. At Ibadan, the audience included many PhD students

from around Africa. The University of Ibadan is the oldest Nigerian university, and the geology department is host to the Life and Earth Sciences Unit of the Pan-African University. Certificates of attendance were handed out, like at most other departments, and I got my own certificate too. I had to use it later as proof of my workplace and for having travelled to Nigeria for work and not for wheeling and dealing! The last stop was at the University of Lagos, where more than 100 predominantly undergraduate students tested my patience. I hope that I was able to arouse some interest in them in the evolution of the ancient Earth as a system. There is an interesting array of Precambrian rocks in Nigeria, and I am specifically referring to the schist belts here, which appear largely undated. Much field-based research, in combination with geochronology and geochemistry, is required. There is no shortage of students there to do the job, but access to analytical facilities and trained technical staff are needed, which applies to most of the departments I visited.

The EAG-GS Outreach Program to Africa provides useful guidance by which African universities can offer advanced (and practical) research opportunities for students. A big thanks to Marie-Aude Hulshoff, Bernard Marty, the EAG and the GS for making this tour through Africa possible.

Axel Hofmann, 2017 Outreach Lecturer



I don't think we'll have time to run any duplicates. . .