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EDITORIAL

Gerhard Brey

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Gerhard in 2017, collecting bison fur in Elk Island Park, Alberta (photo: Anetta Banas)

Clearly the most important fact in Gerhard's life is that he was born in a very special place, the beautiful medieval town of Kallmünz, in the Oberpfalz (Upper Palatinate) of Bavaria. His deep connection to his true home still remains strong today.

Gerhard's academic career began at the Universities of Erlangen and Bochum (1968–73). A highlight that Gerhard still likes to reminisce about was his Diplomarbeit (~MSc thesis) with H.U. Schmincke on Gran Canaria. Here he developed not only a taste for Spanish food and wine, but also a yearning for the wider world in general. This hankering led to a second important event in Gerhard's life, a PhD (1973–76) supervised by his beloved scientific father and hero David H. Green, at the Research School of Earth Sciences (RSES) at ANU in Canberra. In this Institute Gerhard principally learned the exacting skills of an experimental petrologist, but also developed a deep passion for fishing, almost died in a car accident, and to supplement income, eventually became a successful cabby. In addition, he rarely missed the daily games of bridge with Alan Major (majorite) and Bill Hibberson in the tea room of the RSES. Importantly, Gerhard soon adapted to the style of scientific thinking that characterized both David Green and the late Ted Ringwood: Be open to any new idea, but before discussing that idea first test it against the basics that we already know. With David, Gerhard conducted ground-breaking work on the solubility of CO_2 in silicate magmas at high pressure and specifically the role of CO_2 in the genesis of olivine melilitites.

Back in Germany, Gerhard had a short stint at the University of Hannover, before moving as a research scientist to the Max-Planck-Institute for Chemistry in Mainz (1978–94). There, he built his famous experimental petrology laboratory, in the Cosmochemistry division headed by Heinrich Wänke. Initially, Gerhard continued his work on CO_2 in the mantle, with one of the highlights being his discovery that along cratonic geothermal gradients, CO_2 is stored in peridotite in the form of magnesite. But then Gerhard moved into the field of geothermobarometry, a subject for which he is globally renowned.

During the 1980's one of his greatest achievements was to build, with the help of his outstanding technician and friend Rudi Weber, a double-press belt-apparatus and to calibrate it to 1800 °C and 60 kbar. This apparatus lead to one of Gerhard's scientific masterpieces, namely the development of a set of internally consistent geothermobarometers for garnet peridotites, calibrated using olivine capsules and natural systems. With this work, Gerhard removed the basis for the then highly popular "kinked geotherms", which turned out to be a simple artifact of the calibration of earlier geothermobarometers at much lower pressures. During his time in Mainz, Gerhard was fortunate to work with several outstanding postdocs and graduate students, amongst which were Klaus Nickel, Stephen Foley and Thomas Köhler. At this time, he also began his lifelong collaboration with his Russian friends, Vadim Bulatov and Andrei Girnis, and the late Alex Doroshev and Igor Ryabchikov. With this group of collaborators Gerhard conducted some of the most influential studies on the genesis of kimberlite melts.

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In 1994, Gerhard took the position as Chair of Geochemistry and Petrology at Frankfurt University. With that move Gerhard also shifted his scientific focus from experimental petrology to the geochemistry of mantle rocks. I was fortunate to be Gerhard's "apprentice" from 1996 to 2001 when he built his mass spectrometry and clean lab empire from scratch and on a shoe string budget. Gerhard, Jeff Harris and I had a fantastic time working together on inclusions in diamonds, in particular lower mantle specimens from Kankan in Guinea. And I also learned from Gerhard that a scientist has to be willing to take big (but calculated) risks, both intellectually and financially. In the end, Gerhard's isotope ventures did not end in financial disaster but instead, projects like the PhD theses of Marina Lazarov and Qiao Shu lead to major new insights in the origin and evolution of the lithosphere of the Kaapvaal Craton.

One cannot write about Gerhard's time in Frankfurt without credit being given to Heidi Höfer, who besides running his electron microprobe lab, was Gerhard's congenial partner in organizing the most fantastic conferences (EMPG 2004, 9th International Kimberlite Conference 2008, and European Mineralogical Conference in 2012) and, of course, the famous departmental Christmas parties, where Gerhard's considerable cooking skills came to the fore.

Gerhard's scientific achievements were twice honoured by the German Mineralogical Society (DMG), in 1988 through the Victor Moritz Goldschmidt Award and in 2016 through the Abraham Gottlob Werner Medal. Gerhard has been a member of the International Kimberlite Conference Advisory Committee since 1991. In 2014 he officially retired from his chair position at Frankfurt, but as these 11 IKC proceedings volumes document, his scientific career has by no means ended with that step. For his dedication to our science, our conferences, and our community, we owe him our sincere gratitude. Keep going Gerhard!

Thomas Stachel
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