

My Earth science educator story – Peter Bitschene

What I did, why I did it and what happened



Studying geology

The seventies saw some changes in Germany, particularly in the universities. A new, conservative legal framework was put in place, the post-war vacancies for university jobs were already completely full, and the need for geoscientists was at a low. But what first attracted me was that nearly all the natural sciences formed part of geological study. And secondly, there were outdoor excursions! There we go, was my thought, and in my diploma thesis I mapped and investigated igneous rocks in the Black Forest/Germany; also making in-depth research into coal mining there. How painfully slow and demanding these first steps in scientific writing were!

Specializing in volcanology

The eighties showed the world that conflicts may suddenly rise, such as the invasion of the Falkland/Malvinas Islands by Argentinean troops on April 1st 1982. I witnessed the onset

of the hostilities of the Falkland war in April 1982 as a PhD-student in Asunción/Paraguay. But to start from the very beginning, in 1981 I successfully finished my studies as a geologist and looked for geo-adventures! Intraplate volcanism in South America was my choice, together with the prestigious Laboratory for Geochronology at Heidelberg University. I started my PhD-Program with a one-year DAAD (German Academic Exchange Service)-scholarship to Paraguay. It was there that I suddenly became a university teacher too. The personal outcome of my South American endeavor was also the ruining of my partnership here, surviving severe diseases there, and gaining new languages (Spanish and some Guarani) and friends, whilst broadening my horizons. Scientifically, I published my first papers¹ and began lecturing in geosciences at the “Universidad Nacional de Asunción/Paraguay, UNA”.

The route into volcanology continued with my post-doc time from 1987 onwards at “Ruhr University Bochum, RUB” where I now was in charge of the local group working with the Ocean Drilling Program (ODP). A particularly interesting experience was my participation in the ODP-Leg 120 to the far-away Kerguelen Plateau. I felt what it means to sail the “roaring forties”, and I witnessed cutting edge technology when drilling the ocean floor at several thousand meters depth. Scientific writing and teaching geosciences now became routine, whilst marine tephra layers were my favorites².

Becoming a full tenure professor

The nineties saw the re-unification of East and West Germany to become one nation and one state named “Deutschland”. There were opportunities to go east, but I headed for South America again to fulfill my dream: Working and teaching as a geologist in South

¹ e.g. Bitschene & Lippolt, 1984: Acid Magmatites of the Brasiliano-cycle in East Paraguay.

² e.g. Bitschene & Schmincke 1990: Marine tephra layers – composition and significance.

America! This time I went as a long-term investigator and teacher to the “Universidad Nacional de la Patagonia San Juan Bosco in Comodoro Rivadavia/Argentina, UNSJB”, sent by the DAAD (German Academic Exchange Service). I lectured on volcanology and petrology courses at the University there, and finally became a full-tenure professor³ chairing volcanology and petrology. Suddenly in August 1991, being a volcanologist became very challenging, because the Hudson volcano in the Chilean Andes became highly explosive. Volcanic ash was dropping onto my head in Comodoro Rivadavia, some 600 km away from the source. I clearly had to start investigating the Hudson eruption right away. This was crucial because Argentinean Patagonia suffered greatly from wind-borne ash deposition, again in the roaring forties! The scientific outcome was the editing of a book with an Argentinean colleague⁴. Several diploma- and PhD-theses were undertaken under my guidance, and I was quite successful in introducing culture- and language-courses⁵ there, as well as in promoting academic exchange between Germany and South America. To nobody’s surprise, four bi-national marriages also resulted from the exchange.

Starting anew with environmental sciences

After five years of teaching and investigating far away, I returned to Germany in 1994, married, built a house, and failed in my intent to continue with my university career. What could a volcanologist of 40 years of age do? Change! What is really great in Germany is that the state gives you a chance to qualify, through a 1-year further education course, as an environmental manager. When I finished the course there was still no job available, so I became a truck-driver, but one holding a PhD! I started my own environmental consultancy, and soon after worked as a specialist in the remediation of contaminated sites. Although this was nothing to do with teaching, it was real life experience!

The 00-years came, and mainland Europe was – and still is – on the way towards the

United States of Europe through introducing a common currency, the Euro! I witnessed the currency change in Shanghai/China, where I held an appointment as a senior adviser in cleaner production until 2003. My employer was the “Green Industry and Technology Promotion Center, GITPC” in Shanghai, where I built up a “Forum for Environmental Technology and Business”. I had again been sent by a German agency, this time the “Center for International Migration, CIM”, a state-owned agency that provides technology and knowledge transfer to developing countries. Besides my work as a senior environmental adviser, I was also teaching post-graduate courses in “Intercultural Communication” at the “Shanghai Academy of Social Sciences, SASS”. What a wonderful experience with those hungry PhD-students who learned the English language and European habits with me, while teaching me some Mandarin and showing me how the locals really live. And eat!

Fulfilling a dream with geotourism and geoeducation

Coming back from China, I immediately opened up my environmental consultancy, and a few months later ended up becoming the managing director of “Geological and Engineering Advisors, Bochum, BGI AG”. It was quite a challenge to lead a team of 12, and to report monthly to the board of directors. But, it was the first time in my career, that I had held a permanent position plus bonus. This was not too bad, apart from the 50 hrs+ working week and tons of responsibilities! Then an advertisement appeared: The small town of Gerolstein and Gerolstein District were looking for a multilingual geologist, with lots of experience both in volcanology, geology, and intercultural communication; in addition project management and public outreach skills were asked for, as well as a proven scientific record. In January 2004 I started my new job as a geopark manager in the Vulkaneifel Geopark, and as the head of the Gerolstein Museum of Natural History. The decision to accept the job had not been an easy one,

3 Profesor Titular Concursado.

4 Bitschene & Mendia, 1995: The Eruption of the Hudson

Volcano in August 1992 – a Thousand Days after.

5 “Ventana al Mundo Viejo”.

because remuneration was about half of what I had earned before. Nevertheless, at the age of 50, I moved to a new job again.



Field course in volcanology during “Day of the Geotope 2015” at Gyppenberg/Vulkaneifel.

Managing the Vulkaneifel UNESCO Global Geopark in the Gerolstein District was, and still is, quite a challenge. The trails have to be checked yearly, geo-panels have to be designed and set up, specific programs for lay and expert groups have to be developed, guides must be trained, and, of course, excursions, programs, and exhibitions must be carried out, upon request, in four different languages. On the other hand, working in a world-class volcanological field⁶ and in a world-class paleontological area⁷ is a dream for a geologist. All the activities in the geopark and the museum on one hand are related to geoh heritage and its preservation, and on the other hand to geoeducation and geotourism.

The Gerolstein Museum of Natural History holds a crucial position when it comes to preserving, showing, and explaining geological issues to the public. Thus, one of my prime activities and duties at the museum and out of doors is to show mildly interested visitors how the Eifel volcanoes work, and what materials they erupt. A 4-phase model for the intraplate Eifel volcanism has been developed, and is shown, taught, and explained outdoors in the Rockeskyller Kopf

6 the Vulkaneifel is a famous monogenetic volcanic field
7 the Middle-Devonian Gerolstein syncline holds exquisitely preserved trilobites and crinoids

8 e.g. Bitschene & Schmidkonz, 2014: A 4-Phase Model for Westeifel/Germany Alkaline Basalt Volcanoes with Initial Maar-Phase - Implications for Geoeducation.

open-air volcano, and indoors in the museum. To ensure the 4-phase model is scientifically and educationally sound, it has been presented at conferences and congresses⁸, and published in peer-reviewed journals⁹.



Geoh heritage, geotourism and geoeducation at the Gerolstein Museum of Natural History.

A museum of natural history costs more money, the more people are involved in its management. So to make things more cost-effective for the owner of the museum, the town of Gerolstein, and also to fulfill my own dream of becoming an independent museum director, in 2013 I took over the management of the museum as a private entrepreneur, developing a “Public-Private-Partnership” deal between the city of Gerolstein (owner) and me (old and new museum director). This step has proved to be a triple-win situation:

1. the museum costs for the town of Gerolstein are down by 30%;
2. the on-site quality has increased because the museum director now resides in his own museum, and
3. the public outreach and visitor numbers are up!

So, to end with some advice: Managing your own museum may not make you rich, but it may make you and your visitors happier!

9 e.g. Bitschene 2015: Edutainment with basalt and volcanoes – the Rockeskyller Kopf Example in the Westeifel Volcanic Field/Vulkaneifel European Geopark, Germany.

Selected publications

Bitschene & Lippolt, 1985: Acid Magmatites of the Brasiliano-Cycle in East Paraguay.- Zentralblatt Geol. Paläont., 9/10: 1457 – 1468.

Bitschene & Schmincke 1990: Marine tephra layers – composition and significance.- in Heling, D., Rothe, P., Förstner, U. & Stoffers, P. (eds.): Sediments and Environmental Geochemistry (Springer Verlag, Heidelberg): 48 – 82.

Bitschene & Mendia, 1995 (eds.): The Eruption of the Hudson Volcano in August 1992 – a Thousand Days after; Cuvillier Verlag (Göttingen), 164 p.

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Bitschene 2015: Edutainment with basalt and volcanoes – the Rockeskyller Kopf Example in the Westeifel Volcanic Field/Vulkaneifel European Geopark, Germany.- German J. Geol., 166 (2): 187 – 193.

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