

In Memory of German Müller (Feb. 09, 1930 – Dec. 21, 2007)

Ulrich Förstner

Prof. (i.R.) Dr. Ulrich Förstner, Hamburg University of Technology (TUHH), Institute of Environmental Technology and Energy Economics, Eissendorfer Str. 40, 21071 Hamburg, Germany (u.foerstner@tu-harburg.de)

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At the age of only 77 years, Prof. (em.) Dr. Dr. h.c. mult. German Müller, nestor of environmental geosciences in Germany, died on December 21, 2007 at his desk in the Institute for 'Umwelt Geochemie', University of Heidelberg.

In the mid 60s, while already being an internationally reputed petroleum geologist, he became the pioneer of environmental sedimentology and geochemistry in Europe. German Müller was not only a highly respected member of the scientific community, but also well-known in industry, administration and in the public, due to his engagement in various environmental and health issues. During the last fifteen years, he attracted many new colleagues and friends in Central and Eastern Europe as a coordinator of large-scale research projects as well as in Brazil, where he has started a private charity project.

German Müller was born in Schramberg, Black Forest, on February 9, 1930. He studied at the University of Cologne and finished his doctoral thesis on 'The occurrence of carbonates, particularly of ferrugeneous carbonates, in the coal seams of the Ruhr area' at the University of Bonn in 1952 (at the age of 23!).

After a position as geologist-petrologist at the Mining Research and Exploration Institute of Ankara, Turkey, he joined Mobil Oil of Germany as head of the sedimentology laboratory (1953–1957) and then worked as a field geologist for Ethiopia, at the Texas Africa Exploration Company, branch of Texas Gulf Sulphur Company (1957–1959). Soon after his habilitation with Prof. W.v. Engelhardt at the Department of Mineralogy, University of Tübingen, he was called to Heidelberg and established the 'Laboratory for Sediment Research' at the Department of Natural Sciences. Since 1964, he held the position of a Professor of Mineralogy and Petrology at the University of Heidelberg, Director of the Institute of Sediment Research (since 1990, the 'Institute of Environmental Geochemistry'). After his retirement in 1998 he became Professor Emeritus at this institute which he had shaped through his work and personality.

In the course of his remarkable industrial and academic career, German Müller recognized new fields of development at an early point in time. As early as the 1950s, during his time with the oil industry, he understood intuitively the possibilities offered by sedimentary petrography for both oil exploration (stratigraphic traps) and exploitation (extensive recovery due to producing strategies adjusted to the geology of reservoir rocks). He introduced new methods, which resulted in his first book on *Methods of Sedimentary Petrology*.

Similarly, during his time at Tübingen, he studied – in the framework of the Lake Constance Project, the first collaborative research centre in environmental science of the German Research Foundation – the lake as a natural laboratory for both recent sediments and sedimentation processes. These investigations soon revealed (in combination with geochemical data) that recent sediments are indicators of the chemistry of water above them. Later on, this experience became the basis of more in-depth research on the reasons for eutrophication. These studies helped to build

sewage plants all around Lake Constance, thus reducing the contamination load, in particular of the phosphates, to a tolerable level. German Müller, moreover, made numerous contributions to various fields of sedimentary petrology; for instance, he joined the Deep Sea Drilling Project on Leg 56 and 57; he worked on the mineralogy of the recent sediments of the Black Sea; he did research on dolomitisation of biocalcarenes from Fuerteventura, Canary Islands, and many more. Selected aspects and case studies are described in the book *Sediments and Environmental Geochemistry* dedicated to German Müller by his scholars and colleagues on the occasion of his 60th birthday.

The fall of the Iron Curtain in Europe was the starting point for the next big step in his career. He was appointed to be the coordinator of multidisciplinary research programmes of the Ministry of Education and Research on actual and historical contamination in the Elbe and Volga catchments. In October 1992, a first sampling campaign on sediments at the Elbe River, from Czech Republic to the North Sea, took place, and in the subsequent years, programmes for developing infrastructure of the research institutions were installed. The German-Russian cooperation research project on environmental sedimentology started in 1993 with the 'Oka-Elbe' to be extended to 'Volga-Rhine' (1997–2004). German Müller was highly appreciated as an advisor to many national and international institutions, funding agencies and political decision makers.

In recognition of his many achievements, he received the

- 'Diploma of Honor' for Outstanding Contribution to the Petroleum Industry, Pi Epsilon National Petroleum Engineering Society, USA (1983),
- Honorary Membership in the Society of Economic Paleontologists and Mineralogists, Tulsa, Oklahoma (1989),
- Honorary Fellowship of the Geological Society of America (1990), and he became
- recipient of the 'Hans-Stille-Medal' of the Deutsche Geologische Gesellschaft in 1990.

He was awarded

- 'Doctor of Philosophy honoris causa' (PhD.h.c.) of Bedford University Arizona, USA (1983) and
- 'Doctor rerum naturalium honoris causa' (Dr.rer.nat.h.c.) from Trier University, Germany (1990).

In 1986, he received the Philip Morris Research Prize in the field of 'Man and his environment'.

His publications include 320 titles of original contributions, and he is author, co-author, editor, co-editor of eight books.

The character of practical applicability, which was a common factor in all the research at German Müller's Institute, had a favourable influence on the training of diploma and PhD candidates. With his positive view on his students' talents, German Müller's recommendations were a good entrance ticket to both practical and academic positions. The scientific community in many fields and countries will miss him, in particular his friends and his great family – his wife Renate, two daughters, nine sons, fifty-three grandchildren, and one (soon to be two) great-grandchildren.