IN MEMORIAM

Prof. Dr. Hans-Jürgen Beug (18.01.1932 – 05.03.2022)

Prof. Hans-Jürgen Beug passed away on March 5^{-th} 2022 after illness. For more than five decades he was one of the most outstanding internationally recognized scientists successfully working in the broad field of theoretical and applied palynology. In the course of a long and fruitful scientific career he contributed with his co-workers to the understanding of the postglacial vegetation and climate changes, plant migrations, settlement history and human impact in Central Europe, the Mediterranean area, the Balkans, Turkey, the western African coast, Tibetan Plateau, the Himalayas, and many other areas. He founded the Institute of Palynology and Quaternary Sciences at the University of Göttingen of which he was the head for the period 1985-1997. Besides teaching activities the staff of the institute was involved in research of interdisciplinary character comprising palynology, archaeology, paleoethnobotany, geology and geography. Many scholars and students from abroad visited the institute and later on some of them became leading scientists in their own countries. Prof. H.-J. Beug was one of the well-known specialists worldwide in pollen morphology and his intensive work on this topic has resulted in the publishing of Leitfaden der Pollenbestimmung für Mitteleuropa und angrenzende Gebiete (2004). This useful reference found today on every palynological shelf continues the tradition of valuable books series that has started with the printing of Textbook of Modern Pollen Analysis (Faegri & Iversen 1950). It is known by palynologists that detailed knowledge on pollen morphology serves as essential feedback in all aspects of this branch of botanical science ranging from pollen analysis of sediments to honey research and pollen risk forecast.



Coring at Lake Panichishte, Rila Mountain in September 1997 (Photo: S. Tonkov)

The fruitful cooperation with Bulgarian palynologists, botanists and archaeologists was an essential part of Prof. H.-J. Beug's scientific career and life. He has established a close friendship with the family of Prof. Elissaveta Bozilova and Prof. Stefan Kozuharov in the early 70^{-ties} of the past century which continued until his last days. Prof. H.-J. Beug travelled many times to Bulgaria and his first visit was in 1973 when he presented a paper at the International Symposium on the Problems of Balkan Flora and Vegetation dedicated to the 50^{-th} anniversary of the Bulgarian Botanical Society. During the subsequent trips he participated in field excursions along the Black Sea coast and the river Danube, in the Rila, Pirin, Western Rhodopes, Vitosha, Konyavska, Sredna Gora mountains and visited places of botanical, historical and archaeological interest. In this way he helped the Bulgarian palynologists (Elissaveta Bozilova, Mariana Filipova, Maria Lazarova, Ljuba Filipovitch, Ivanka Stefanova, Hristina Panovska, Spassimir Tonkov) to obtain sediment cores from lakes, peat-bogs and mires with his hand-coring equipment for their pollen and plant macrofossil analyses supplemented also with radiocarbon dates. Prof. H.-J. Beug always shared generously his profound knowledge on various aspects of palynology, pollen morphology, paleoecology, botany and archaeology with colleagues from the Department of Botany at Sofia University St. Kliment Ohridski, the former Institute of Botany at the Bulgarian Academy of Sciences and the Natural Museum in Varna. He published with Bulgarian colleagues the results from the paleoecological investigations of Lake Varna (Bozilova & Beug 1992), Lake Arkutino (Bozilova & Beug 1994) and Lake Bolata (Tonkov & al. 2011). In these papers he substantially contributed to the elucidation of the Holocene vegetation dynamics, lake level changes, human occupation and impact along the Bulgarian Black Sea coast. The last visit of Prof. H.-J. Beug in our country was in the spring of 2015 when alongside the excursion to the karst area of Karlukovo a draft of his idea to publish the fossil seeds of Aldrovanda vesiculosa found in the sediments of Lake Arkutino was prepared (Beug & Tonkov 2017).

In my early scientific years I had the unique chance to receive a scholarship in 1986 for two months at the Institute of Palynology and Quaternary Sciences upon an invitation by Prof. H.-J. Beug. In the laboratory under his guidance I had the opportunity to learn the first steps and techniques in the identification of plant macrofossils and to get also familiar with the rich pollen reference collection. I keep also unforgettable memories from our talks and discussions during the field trips where he also advised me how to collect sediment cores.

Besides being an outstanding scholar Prof. H.-J. Beug will be remembered as a highly erudite colleague and friend with many interests, an enthusiastic musician and nice companion with subtle sense of humor.

References:

- **Beug, H.-J.** 2004. Leitfaden der Pollenbestimmung für Mitteleuropa und angrenzende Gebiete. Verlag Dr. Friedrich Pfeil, München.
- Beug, H.-J. & Tonkov, S. 2017. Evidence of Holocene fossil Aldrovanda vesiculosa (Droseraceae) seeds at Lake Arkutino, southeastern Bulgaria. – Phytol. Balcan., 23(3): 337-339.
- Bozilova, E. & Beug, H.-J. 1992. On the Holocene history of vegetation in SE Bulgaria (Lake Arkutino, Ropotamo region). – Veg. Hist. & Archaeobot., 1: 19-32.
- **Bozilova, E. & Beug, H.-J.** 1994. Studies on the vegetation history of the Lake Varna region, northern Black Sea coastal area of Bulgaria. Veg. Hist. & Archaeobot., **3**: 143-154.
- Faegri, K. & Iversen, J. 1950. Textbook of Modern Pollen Analysis. Ejnar Munksgaard, Copenhagen.
- Tonkov, S., Beug, H.-J., Bozilova, E., Filipova-Marinova, M. & Jüngner, H. 2011. Palaeoecological studies at the Kaliakra area, northeastern Bulgarian Black Sea coast: 6000 years of natural and anthropogenic change. -- Veg. Hist. & Archaeobot., 20: 29-40.

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