

Gerhard Lang (21.10.1924–19.6.2016)

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Gerhard Lang, one of the great German botanists and palaeoecologists of the 20th century, died on the 19th June 2016 in Biberach, southern Germany. He will be greatly missed by his friends and colleagues, not only for his vast expertise in botany, ecology, biogeography, and vegetation history, but also for his integrity, kindness, and humour. For many of his students and post-doctoral fellows he was not only an excellent teacher and mentor, but also an important role model (Fig. 1).

Gerhard Lang was born on October 21st 1924 in Ravensburg. Already in his youth he was an enthusiastic botanist and undertook many floristic excursions in southern Germany. His high school biology teacher was the botanist Karl Bertsch, who did pioneering work on pollen analysis and the vegetation history of southwestern Germany, and he certainly enthralled the teenager Gerhard with this field of science.

At the age of 17, whilst still at high school, Gerhard was conscripted into the Wehrmacht and sent to fight on the Eastern Front in Russia where he was severely wounded twice. After the war he finished high school in 1946 before starting his studies in biology with chemistry and physics at the University of Freiburg im Breisgau. In 1948 he moved to Göttingen University where, in 1952, he received a doctorate for his study on the late-glacial history of the

vegetation and flora of southwestern Germany, supervised by Franz Firbas. During his doctoral studies, he spent some time in Cambridge supported by the British Council at the invitation of Harry Godwin. It was there that Gerhard



Fig. 1 Gerhard Lang (1924–2016)

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developed his great friendship with Donald Walker, then a doctoral student with Godwin.

Between 1952 and 1975 Gerhard worked at the *Landesammlungen für Naturkunde* (now *Staatliches Museum für Naturkunde*) in Karlsruhe, first as a scientist, later as curator, and eventually as deputy director of the museum. His first superior was Erich Oberdorfer who later became his father-in-law. Gerhard was involved in producing several vegetation maps at the scale of 1:25,000 based on classical phytosociological relevés or plots. At the same time he continued pollen and plant macrofossil analyses of lake and mire deposits in the Schwarzwald (Black Forest) and extended his studies to the Bodensee (Lake Constance) region. In 1962 Gerhard became lecturer in Geobotany at the University of Karlsruhe and in 1966 he submitted his habilitation thesis on the macrophyte vegetation of Bodensee. Karlsruhe University appointed him professor at the Botanical Institute in 1972. Besides supervising masters' and doctoral students he gave lectures on floristic geobotany, vegetation history, plant geography, and the vegetation of Europe as well as leading phytosociological field practical classes and botanical student excursions.

His broad background knowledge of geobotany was also greatly beneficial during his sabbatical leave in eastern Australia in 1965 when he worked in Donald Walker's department. They realized that the originally planned palynological study was unrealistic within the 8 months of Gerhard's stay in Canberra and so he undertook a phytosociological study of the sclerophyllous forests of the Brindabella Range (Lang 1970), thus introducing the Braun-Blanquet phytosociological approach into the Southern Hemisphere.

In 1975 he was appointed full professor and director of the *Systematisch-Geobotanisches Institut* and Botanical Garden by the University of Bern, Switzerland, succeeding Max Welten. In Bern he continued to study and teach both present-day ecology and the past dynamics of vegetation, thus covering vegetation dynamics in all its four dimensions. With his deep interest in aquatic vegetation and plant macrofossils he introduced new approaches to the institute in Bern (Lang 1975). Moreover, Gerhard also initiated new coring techniques: whereas the traditional sediment coring was carried out on mires or overgrown areas of lakes with a Hiller corer by his Bern predecessors, he introduced sub-aquatic coring from a raft using modified Livingstone piston corers that allowed sediment sampling in the centre of lakes. Gerhard Lang led the Bern Institute from the traditional research of historical geobotany and vegetation history towards a multi-proxy palaeoecology. This new approach is well reflected in the Alpine transect worked out as one of Gerhard's major projects presented to the International Geological Correlation Programme 158b (Lang 1985).

Gerhard was an excellent teacher. It was always his concern not only to convey theoretical knowledge through lectures, but also to impart geobotany to his students through observations and discussions in the field. In Bern he soon initiated the annual "Moorexkursion"; originally intended for his advanced students it eventually became increasingly popular among many external doctoral students and international colleagues. This "Bog Excursion" still continues and is celebrating its 40th gathering in 2016.

Gerhard's scientific work was characterized by his broad ecological knowledge. He was strong in both modern vegetation ecology and vegetation history. The monograph on the vegetation of the western Bodensee region (Lang 1973) is a perfect example of his understanding of geobotany and his scientific approach, combining floristic inventories, phytosociological mapping, and vegetation history with ecological and stratigraphical research to understand a landscape in a comprehensive way.

As the leader of a research group, Gerhard was always not only correct but fair, helpful, inspiring, and joyful. Many pleasant anecdotes circulate among his many colleagues, former students, and international friends.

In 1989 at the height of his scientific career Gerhard had to retire and become professor emeritus. He moved back to southern Germany, the region from which he had originated, and he concentrated on finishing writing his textbook on the Quaternary vegetation history of Europe (Lang 1994), currently out of print. Gerhard had a unique sense of aesthetics, a fact not only expressed in the style of the interiors of his houses, but also in the graphics of his textbook, all drawn by hand in India ink. Although computer graphics would have been available, he refused to submit to them.

Approximately 15 years after his retirement, Gerhard published a synthesis on the mires and lakes of the Schwarzwald, a synoptic overview he had already started during his time in Karlsruhe but was not able to finish whilst in Bern. He was well aware of the fact that his field of science had advanced in the meantime, as had the dating techniques. Nevertheless, he felt a strong obligation to bring this research to an orderly end. His last intended scientific publication was, as he wrote in the preface of this work (Lang 2005) "vermutlich die letzte dieser Art aus meiner Feder" (presumably the last one of this kind from my pen). However, two more publications followed (Lang 2006; Ammann et al. 2014). An overview of his publications can be found at: www.ips.unibe.ch/gl.

Only recently did we learn that the hardest, most painful experience in Gerhard's life was the fact that he was forced into the Second World War at such a young age. This traumatic experience had left a very deep mark on his life. Yet, more so, we are amazed that a young human being so deeply traumatized by the horrors of war on the Eastern

Front became such a harmonious, kind, generous, and modest person with such a warm sense of humour.

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