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Obituary
Elisabeth Peveling

Elisabeth Peveling, distinguished lichenologist and professor of botany at the Westfälische Wilhelms-Universität Münster (Germany) died unexpectedly of cancer on July 31, 1993. The scientific community in botany, lichenology and symbiosis research lost a dedicated and highly successful scholar and academic teacher and a unique personality.

Elisabeth Peveling was born on March 31, 1932 in the small town Blankenstein/Ruhr (Germany) as the first of two children of a watchmaker and optician in the third generation. The strongly catholic and conservative parental home provided a secure and harmonic environment in which she grew up with her younger brother in a large family setting which included grandmother, aunt and house maid. Her interest in the Natural Sciences was already fostered at school where she was always top of her class. In 1949 while still at high school she won a regional prize for a study on the local flora of the Ruhr valley near Blankenstein.

After finishing school in 1952 she studied biology, mathematics and physics at the universities of Münster, Innsbruck and Göttingen and in 1960 completed her Ph.D. (Dr. rer. nat.) under the supervision of S. Strugger at the Botany Department in Münster. Her dissertation involved a light and electron

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microscope study on the karyology of *Cucumis sativus*. After obtaining her Ph.D. she took a position as a research associate at the Botany Department in Münster. In 1964/1965 she spent a year at the Department of Zoology, University of Michigan at Ann Arbor with a fellowship from the Carnegie Institution of Washington where she studied the structure of polytene chromosomes in the salivary gland of *Drosophila*. After returning to Münster she co-discovered the plasto-globules inside chloroplasts (with H.K. Lichtenthaler) and started her work with lichens stimulated by H. Reznik, successor of S. Strugger and then director of the Botany Department. She was presumably the first person to use the scanning electron microscope to study the interactions between lichen symbionts (1968). In 1969 she obtained a Habilitation degree (in Botany) from the Westfälische Wilhelms-Universität in Münster, and in 1971 she was appointed Professor of Botany in Münster where she stayed until her untimely death.

Elisabeth Peveling's scientific contributions were numerous and vital to her reputation as a pioneer in the ultrastructural analysis of lichens and their symbionts. She readily recognized the potential of new techniques and applied them to her favorite organisms: scanning electron microscopy, freeze-fracture analysis, electron microscope autoradiography, and lectin fluorescence to name but a few.

What is less well known is that she was a dedicated and very successful academic teacher as well, possibly related to the fact that originally she wanted to become a school teacher herself. She trained hundreds of students and many became school teachers. In courses and lectures she was demanding, requiring discipline and hard work from the students, but in return she gave more than she received. She sometimes may have been rough particularly on female students, but she knew from her own experience that only dedication, self-discipline and hard work helped her to succeed as a woman in science. Those who knew her better realized that under a seemingly tough shell there was a soft core, a person who was selflessly willing to give and help, a practising catholic and a member of the order of knighthood from the holy grave of Jerusalem. She also had a sense of Westphalian humour, something that people living outside this special part of Germany will find difficult to grasp. When I came to her laboratory as a research assistant in 1978 she told me that she would only hire male assistants. When I asked her why, she said that she needed somebody to fix the electron microscope in case it breaks down and to collect copper grids that by accident might have fallen underneath the electron microscope and I would surely understand that women should not crawl underneath a microscope!

Elisabeth Peveling also had great organizational skills and in combination

with her righteousness these made her a natural administrative leader. It was therefore no surprise that she was often asked and persuaded to take on various administrative duties within her university ranging from Dean of the Biology faculty and Dean of the Faculty of Mathematics and Natural Sciences (since 1991) to Vice President of the University (1978–1982; she was the first woman in this capacity in Münster). Shortly before her death she was elected to chair the national board of Mathematics and Natural Sciences faculties in the country. Elisabeth Peveling was an active member of many professional societies including the International Association of Lichenologists. For the latter society she organized a highly successful International Symposium in Münster. She was also an Editorial Board member of the journal, *Symbiosis*. Elisabeth Peveling will be missed by her students, friends, and colleagues from all over the world.

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