



OBITUARY

Professor Wilfried H.O. Ernst (1937–2016)

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Wilfried Hans Otto Ernst was born on 18 April 1937 in Ottmachau, which then belonged to Germany. After World War II, the province of Silesia was assigned to Poland, and the family was forced to move, almost without any of their belongings. Wilfried attended secondary school in the region of Osnabrück. Due to his great interest in nature at an early age, his biology teacher at the Goethe Gymnasium invited him to guide field trips to complement lessons, mostly at weekends. From 1958 onwards Wilfried attended the Westfälische Wilhelms-Universität Münster, graduating in natural sciences (physics, botany, zoology, geology and geography), as well as undergraduate studies of philosophy and psychology. He started his doctoral studies in 1962, supervised by Professor W. Baumeister, and was awarded *doctor rerum naturalium* in 1964, based on a study of vegetation on heavy metal-polluted soils in Central Europe (Ernst 1964). He elaborated on the theme of this dissertation in his Habilitationsschrift (Ernst 1969) and his later seminal work *Schwermetallvegetation der Erde* (Ernst 1974). The latter work included the results of his studies as A.W.F. Schimper Fellow in southern Africa, at the University of Salisbury (now Harare). His wife, Ingela Ernst-Niermann, joined him on this southern trip shortly after they had married in Münster, where she had completed her studies in botany, zoology, geography, chemistry and philosophy.

In 1973, at only 36 years old, Wilfried Ernst was appointed Professor of Plant Sciences at the Vrije Universiteit Amsterdam, where he worked until his retirement in 2002. He performed studies in plant science in its full diversity, from vegetation science to ecophysiology, genetics and molecular biology. Appointed in Amsterdam, Wilfried realised that he was already internationally renowned as an expert in plant resistance to heavy metals and air pollution, which left him no choice but to undertake further research on this area of expertise, both in terrestrial and aquatic environments. But he managed to extend his area of research to other, mostly relatively extreme, environments. In addition to metallophytes, also nitrophytes, halophytes and dune slack plants received his attention. He also liked to collaborate with the animal ecology group in Amsterdam, due to his interest in plant–insect interactions, not to mention plant–fungus interactions. His ongoing interest in southern African woodlands and savanna ecosystems led to several dissertation studies.

Professor Ernst supervised 50 doctoral studies and conferred an honorary doctorate on Casper Sprey, director of Provinciaal Waterleidingbedrijf Noord-Holland (*the Dutch Water Utility of the North-Holland Dune Reserve*). Most importantly, we should emphasise that Wilfried, throughout his career, managed to find time to perform his own hands-on practical research. He was involved in breeding experiments in the glasshouse, and could be found in the library, reading or writing, rather than in



Professor Wilfried H.O. Ernst investigating fruit-eating insects in *Schoenus nigricans* on the island of Borkum (photo: Ingela Ernst-Niermann)

his office. The trips to Africa, where he supervised local projects, provided him with an opportunity for innovative research, for example on the ecology of the grapple plant or ‘devil’s claw’ in the Kalahari (Ernst *et al.* 1988). He published ca. 300 scientific papers, including books and contributions to books on organismal responses to environmental stresses (e.g. Baumeister & Ernst 1978) and publications on the ecophysiology and evolution of heavy metal tolerance (e.g. Ernst 2006), but also scientific papers on the population biology and life cycle of plant species (e.g. Ernst 1983). Furthermore, he published on ecosystem dynamics and plant–insect relations in African savannas (e.g. Ernst *et al.* 1990) and on dune slack vegetation with *Schoenus nigricans* in Europe (e.g. Ernst 2009; see photograph above), not to mention his interest in ecological concepts (e.g. Ernst 1978). He also held editorial roles, as member of the boards of a range of experimental scientific journals and as reviewer of several hundreds of manuscripts submitted to a range of journals. On the occasion of Wilfried’s silver jubilee, 25 years after he started his doctoral research, Rozema & Verkleij (1991) produced a *Book of Friends*, in which his bibliography until that date was listed.

As president of the Koninklijke Nederlandse Botanische Vereniging (*Royal Botanical Society of the Netherlands*), Professor Ernst played a major role in the merger of two botanical journals – *Acta Botanica Neerlandica* and the German equivalent, *Botanica Acta* – into the new journal *Plant Biology* (since 1999). He was review editor of the new journal for some years. He also managed to guide year-to-year field trips in Germany for members of the Society. His unique and enthusiastic style of field trip guidance, including his extraordinary knowledge of the literature related to field observations – from geology and geography to vegetation science, ecophysiology and genetics – gained him much international recognition. For all these reasons, the Society awarded him an honorary membership.

Professor Ernst was an inspired teacher and a respected advisor to several governmental and non-governmental organisations. Throughout almost all his years in the Netherlands, he was an advisor to the nature management organisation of the North-Holland Dune Reserve. He was a long-standing member of the Koninklijke Hollandsche Maatschappij der Wetenschappen (*Royal Holland Society of Sciences and Humanities*), where he was a member of juries to select winners of prestigious prizes. On request, he provided the Gezondheidsraad (*Health Council*) of the Dutch Government with several informative reports on ecotoxicological risk analysis, and occasionally contributed a scientific evaluation to court documents in cases of environmental metal pollution. But apart from those invited reports, he also provided uninvited advice on environmental pollution to government bodies and industry, which they had difficulty in ignoring as they were invariably based on solid research.

In the 1970s, two sons were born to Wilfried and Ingela Ernst, Fabian and Marius, both of whom graduated and completed doctoral studies at the Technical University Delft in mathematics and material sciences, respectively. And the birth of four grandchildren later enhanced their family life.

After his retirement, Wilfried continued to do research, but now – submitting to his early hobbies – he concentrated on surveys of insects in his home neighbourhood (syrphids, butterflyflies and moths in particular) and of breeding birds. At

home, windowsills and the backyard became a useful laboratory. Almost weekly, he frequented his former lab and the library at the university. On 31 August 2012, while Wilfried was still full of vitality, all his former doctorate students and colleagues celebrated his golden jubilee, ‘50 years passion in science’, with a booklet picturing his life and scientific career (Van Anandel *et al.* 2012). On that day, he was eager to guide a field trip, followed by giving a talk on the development of scientific views on ‘Linné’s flower clock’.

Professor Ernst passed away on 31 March 2016, in Hoofddorp. We have lost a most eminent scientist. All who have experienced his inspiration will remember him with great respect and inexpressible gratitude.

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