

Hans Rudolf Preisig (1949–2011)

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Hans (or Hans Ruedi as he was called in Switzerland) was born 1949 in the city of Winterthur, Switzerland where he grew up and spent most of his life. He obtained his education in Botany at the University of Zurich. For his Masters degree, which he completed in 1973, Hans investigated the ecology of the grass genus *Glyceria*. Already during his Masters he began to work for the governmental water supply agency, surveying the plankton found in Lake Zurich. It was during this jaunt into a non-academic field that Hans realised: “...Dabei wurde ich auf das Gebiet der Algologie aufmerksam. Ich stellte fest, dass dieser wichtige Teilbereich der Botanik an Schweizerischen Hochschulen vernachlässigt wird...” (Cited from the introduction of Hans’ PhD thesis; Preisig 1979; translation “...There I learnt about phycology. I realised this extremely important part of Botany is neglected by Swiss universities...”). Encouraged by his chief at the water supply agency, Dr. U. Zimmermann, Hans started his

PhD under the supervision of C.D.K. Cook, Zurich, and P. Bourrelly, Paris.

In his PhD thesis, Hans investigated seasonal dynamics and succession of algal biodiversity, and shifts of populations and their ecology (including Cyanobacteria) in small water bodies in Switzerland. His PhD also included the challenging identification of the colourless and coloured flagellates. This work led to the description of seven taxa new to science.

From 1979 to 1981, Hans was based at the Institute of Terrestrial Ecology, Cambridge, United Kingdom, where he completed post-doctoral research on the ultrastructure of algae, in particular the golden algae *Paraphysomonas*. Within the genus, these studies revealed seventeen species new to science and several new subspecies and combinations. Furthermore three new genera plus a new family were established. Hans’ extensive work on the genus *Paraphysomonas* formed the basis of his habilitation to gain the *venia legendi* (i.e. the right to teach) at the University of Zurich.

When Hans returned to Switzerland in 1981, he obtained a position as researcher and lecturer at his *alma mater*, the University of Zurich. And apart from a short sabbatical at Massey University, Palmerston North, New Zealand in the early 90’s, Hans stayed in Zurich where he carried out his research and fulfilled his teaching requirements in both undergraduate and graduate courses. Not only did he take his students locally into the field to look at algal biodiversity during their studies, but he also organized field-courses along Europe’s seashores to introduce students to the fascinating diversity of marine algae. Moreover, he supervised numerous Masters and PhD students. These works covered a broad range of questions about ecology, biodiversity, ultrastructure, taxonomy and physiology of a range of algal groups such as chrysophytes, dinoflagellates, desmids, *Vaucheria*, diatoms and cyanobacteria.

Hans’ interests were broad, however, the diversity of flagellates was his true passion. In many of his research articles he addressed crucial questions about the cellular ultrastructure of many flagellated protist taxa. These results contributed to a more comprehensive understanding of protist taxonomy, systematics and ecology. Moreover, Hans’ work established clear definitions for the terminology and nomenclature of protist cell structures. One of the more spectacular parts of his research related to the occurrence of several cases of sudden deaths of cows in alpine meadows during the 90’s. These deaths generated much publicity and caused

the future of pristine alpine lakes to be questioned, plus challenging both Swiss veterinarians and microbiologists. Hans was member of the research team that revealed the cause of these deaths. Specifically, periods of advantageous environmental conditions had allowed toxic cyanobacteria to accumulate and as cattle came to drink at these shallow lakes, they were lethally poisoned.

In addition to his teaching, Hans authored or co-authored more than thirty publications and contributed with chapters to numerous books. Together with J. Kristiansen he wrote two books, probably Hans' most important legacy: Encyclopedia of Chrysophyte Genera - Bibliotheca Phycologica (Kristiansen & Preisig 2001) and Chrysophyte and Haptophyte Algae - Süßwasserflora von Mitteleuropa (Kristiansen & Preisig 2007). His articles stand out because of their solid science and thorough and accurate presentation. In total, Hans was involved in the description of forty taxa new to science (or newly combined), including three new genera (*Chromophysomonas* Preisig & D.J.Hibberd 1982 and *Polylepidomonas* Preisig & D.J.Hibberd 1982 and *Botryochloropsis* Preisig & C.Wilhelm 1989) and one new family (Paraphysomonadaceae Preisig & D.J.Hibberd 1982). In addition and of extreme importance for local biodiversity research are the numerous first records of taxa in Switzerland made by Hans over his 35 year research career.

In the later stage of his career, Hans offered his expertise and broad phycological knowledge to numerous journals, where he served as Editor or Editorial Adviser. However, probably his most important editorial role was with *Nova Hedwigia* (1993–2010). He will be sadly missed too as the phycology expert in the Editorial Board of *Plant Ecology and Evolution*. A full list of his editorial activities is given further.

Besides algae, Hans' other passion was football. He rarely missed a good soccer game: as a child he cheered, together with his best friend Beni, for his hometown club FC Winterthur, later for the Swiss national team or the English Premier League clubs Arsenal or Chelsea, an inheritance of his post-doc days. With the same expert approach that he applied to algae, Hans understood and could discuss tactics, strategy and the participants of the sport.

Hans fought his biggest battle during the last three years of his life. In 2009, he was diagnosed Amyotrophic Lateral Sclerosis (ALS), a motoneuron degenerative illness. With much patience Hans accepted his fate and always tried to be good-humored when he was among his family or friends. Hans leaves behind his wife Mariann and his three sons Tobias, Stefan and Daniel.

Not only does Hans leave a gap as a scientist, colleague and friend, but he was also the last senior researcher and lecturer employed at a Swiss university investigating and teaching the systematics of algae.

ACKNOWLEDGMENT

Special thanks to Hans' wife Mariann Müggler and to his son Daniel for providing me with specific information and photographs. I am also very thankful to Merran Matthews and

Rolf Rutishauser for valuable criticism to improve the first draft of this obituary.

SCIENTIFIC WORK

Described taxa and new combinations in alphabetical order:

- Anabaena bergii* var. *limnetica* Couté & Preisig 1978
Botryochloropsis Preisig & C.Wilhelm 1989
Botryochloropsis similis Preisig & C.Wilhelm 1989
Chromophysomonas Preisig & D.J.Hibberd 1982
Chromophysomonas trioralis (E.Takahashi) Preisig & D.J.Hibberd 1982
Chrysosphaerella solitaria Preisig & E.Takahashi 1978
Dichrysis Preisig 1978
Dichrysis suborbicularis Preisig 1978
Dichrysis ventricosa Preisig 1978
Entosiphon applanatum Preisig 1979
Mallomonas alphaphora Preisig 1989
Notoselus skujai var. *maior* Preisig 1979
Paraphysomonadaceae Preisig & D.J.Hibberd 1982
Paraphysomonas acantholepsis Preisig & D.J.Hibberd 1982
P. bourrellyi (E.Takahashi) Preisig & D.J.Hibberd 1982
P. caelifrica Preisig & D.J.Hibberd 1982
P. cancellata Preisig & D.J.Hibberd 1982
P. canistrum Preisig & D.J.Hibberd 1982
P. capreolata Preisig & D.J.Hibberd 1982
P. circumvallata subsp. *mediogranulata* Preisig & D.J.Hibberd 1982
P. corynephora Preisig & D.J.Hibberd 1982
P. diademifera (E.Takahashi) Preisig & D.J.Hibberd 1987 (described 1982, validated 1987)
P. gladiata Preisig & D.J.Hibberd 1982
P. homolepis Preisig & D.J.Hibberd 1982
P. ignivoma Preisig & D.J.Hibberd 1982
P. limbata Preisig & D.J.Hibberd 1982
P. morchella Preisig & D.J.Hibberd 1982
P. poteriophora subsp. *manubriata* Preisig & D.J.Hibberd 1982
P. punctata subsp. *atrema* Preisig & D.J.Hibberd 1982
P. punctata subsp. *microlepis* Preisig & D.J.Hibberd 1982
P. punctata subsp. *simplicior* Preisig & D.J.Hibberd 1982
P. runcinifera Preisig & D.J.Hibberd 1982
P. stelligera Preisig & D.J.Hibberd 1982
P. stephanolepis Preisig & D.J.Hibberd 1982
P. subquadrangularis Preisig & D.J.Hibberd 1982
P. undulata Preisig & D.J.Hibberd 1982
P. vacuolata (Thomsen) Preisig & D.J.Hibberd 1987 (described 1982, validated 1987)
P. vestita subsp. *truncata* Preisig & D.J.Hibberd 1982
Polylepidomonas Preisig & D.J.Hibberd 1982
Spermatozopsis similis Preisig & Melkonian 1984
Synura petersenii f. *glabra* (Korshikov) Kristiansen & Preisig 2007

EDITORIAL WORK

Editor of **Freshwater Flora of Central Europe** (Süßwasserflora von Mitteleuropa) (since 2005, editorial adviser since 1990)

Editor/Coordinator of **Nova Hedwigia** (since 1993)

Associate Editor of **European Journal of Phycology** (1993–1999)

Editorial Adviser of **Archiv für Protistenkunde** (1990–1997)

Editorial Adviser of **Phycologia** (1989–1990)

Editorial Adviser of **Systematics and Geography of Plants** (1999–2010)

Editorial Adviser of **Cryptogamica Helvetica** (since 2005)

Editorial Adviser of **Plant Ecology and Evolution** (2010–2011)

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