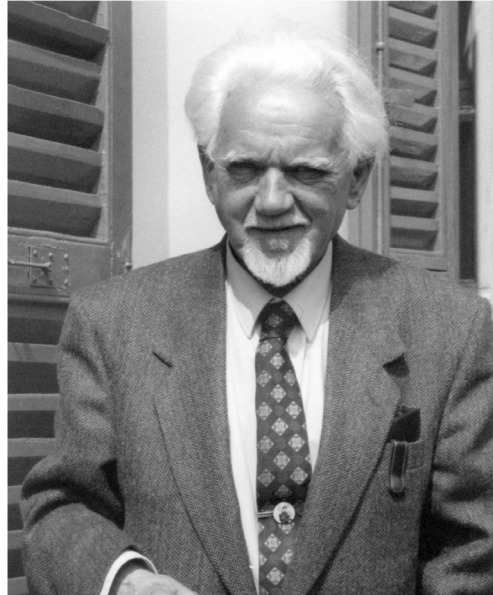


Richard A. Vollenweider

(Zürich 1922 ÷ Burlington 2007)



It is with deep sadness that I write this short obituary of Professor R.A. Vollenweider. I am highly indebted to him for his scientific suggestions, teaching and discussions, but most of all for his friendship, which goes back to 1950.

R.A. Vollenweider was born in Zürich (Switzerland) on June 27, 1922. He obtained his PhD degree in Biology from the University of Zürich in 1951, subsequently becoming Research Assistant at the Hydrobiological Institute, Kastanienbaum (Switzerland). From 1954 to 1955 he was a Postdoctoral Fellow at the Istituto Italiano di Idrobiologia, Pallanza (Italy) and from 1955 to 1957 Postdoctoral Fellow and Research Assistant at the Limnological Institute of the University of Uppsala (Sweden). From 1957 to 1959 he carried out limnological research as a UNESCO-FAO

expert at the Institute of Oceanography and Fisheries Research (Alexandria, Egypt). From 1959 to 1966 he was Research Fellow at the Istituto Italiano di Idrobiologia, Pallanza (Italy). From 1966 to 1968 he was a full time consultant to OECD (Paris). From 1968 to 1988 he worked at the Canada Center for Inland Waters (CCIW) and the National Water Research Institute (NWRI).

In these organizations he held important positions of responsibility such as Head of the Fisheries Research Board Laboratory, Director of Lake Research Division, member of the NWRI management team, advisor to the Director of NWRI for the interdisciplinary research programme in water quality on a national scale. In addition, he was a member of the Scientific Committee of ILEC (International Lake Environment Committee). At the time of his retirement he was Senior Scientist Emeritus.

The research carried out by Vollenweider during his time at the Institutes of Pallanza and Uppsala focused on phytoplankton primary production and the reciprocal influence of the physical and chemical variables of the medium. He was the first to quantify the primary production in Italian lakes using the ^{14}C technique. A testimony to Vollenweider's interest in primary production is the useful handbook "Methods for Measuring Primary Production in the Aquatic Environment" published in 1969 by Blackwell. These studies were a useful basis for tackling the problems of eutrophication during the following years.

Richard Vollenweider had a major influence on the various aspects of limnology, and particularly in the field of eutrophication processes. His OECD Report "Scientific Fundamentals of Lakes and Flowing Waters with particular Reference to Nitrogen and Phosphorus as Factors in Eutrophication" (1968) is a milestone for understanding the trophic evolution of freshwater ecosystems and their management. The basic concept of this publication is the functional unit of the water body with its watershed. This concept was the background of the "OECD Cooperative Programme on Eutrophication". This programme was supervised by Vollenweider from 1971 to 1980. The final report "Eutrophication of Water, Monitoring, Assessment and Control" was published by OECD in 1982.

Vollenweider very successfully applied his outstanding experience in freshwater eutrophication to the eutrophication of the marine coastal waters of the Adriatic Sea. To this end, from 1978 to 2004 he spent some months each year at the Centro di Ricerche Marine e Strutture Oceanografiche Daphne (Cesenatico, Italy). In recognition of his scientific commitment to safeguarding the Adriatic he received the "Cervia Ambiente Award" from Emilia-Romagna Region (Italy).

In conclusion, Vollenweider produced an impressive number of excellent papers dealing with various and fundamental aspects of theoretical and applied limnology. The recognition and the numerous awards he obtained demonstrate the extent to which his scientific value was appreciated by the scientific community. For example, he was chairman of several committees of OECD, UNESCO and WHO. He held honorary degrees from the Universities of McGill (Montréal), Uppsala and Ferrara. He received the Tyler Prize (equivalent to the Nobel Prize in Environmental Sciences), was a Laureate of the UNEP Global 500 Roll of Honour, and was awarded the Naumann-Thienemann medal of the SIL (International Society of Limnology). The National Water Research Institute (NWRI) of Canada instituted in his honour the "R.A. Vollenweider Lectureship Award in Aquatic Sciences", given annually to a distinguished aquatic scientist. He was also an Emeritus Member of the SIL and the SitE (Società Italiana di Ecologia).

This brief description of Vollenweider's *curriculum vitae* is not complete without reference to some important aspects of his personality.

He had great scientific honesty and always placed his research activities before his career interests. Richard was a self made man in the sense that the elevated position he reached in the scientific world was due only to the quality of his scientific work. His papers and reports contain a wealth of original ideas clearly explained, the result of hard and scrupulous work. He was always well informed about the latest limnological literature, in addition to have a thorough knowledge of the literature of the past, thanks also to his familiarity with seven European languages. He was severely critical of himself and his colleagues, but I must emphasise that this criticism was directed at the scientific quality of the research and never the scientist. I never detected any envy in Richard; this is shown by the fact that he always felt profound esteem and friendship for colleagues with real or potential scientific value and honesty. Richard had a deep interest in cultural and human problems. Although research was his first priority, he loved life and always needed to interact with people, independently of their cultural and social levels. Richard was very proud to be a Swiss citizen, retaining his nationality to the end of his life. He considered Italy his second homeland and appreciated the Italian landscape, people, culture and food. Richard had an extensive knowledge of German literature and particularly of Goethe. In addition, he loved reading a number of Italian writers in their own language, particularly Pirandello and Malaparte. One of his hobbies was playing the violin and listening to music.

It is a great honour for me to be Richard's co-author in two publications. Richard died on 20 January 2007, after a long illness, at Burlington (Ontario, Canada).

With his death I have lost one of the best of friends.

Oscar Ravera