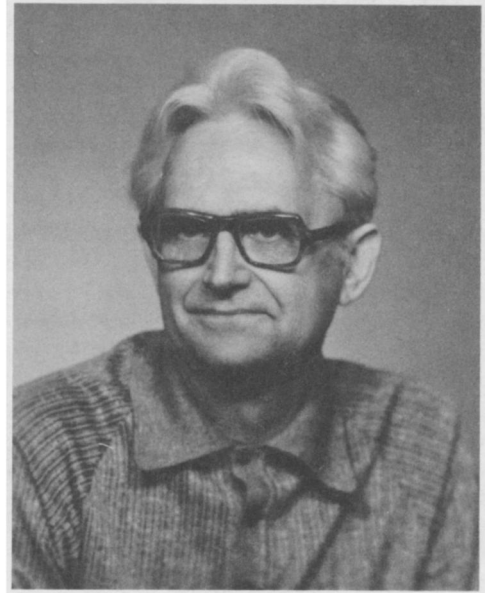


Jaroslav Hrbáček

Perhaps different sorts of minds are interested in and explore the role of nutrients on one hand or the role of consumers on the other in the structure and function of ecosystems. Limnology classically focused on the regulatory role that nutrients and energy played in the control of lower trophic levels and in the apparent trophic status of lakes. Dr. Jaroslav Hrbáček, the recently retired director of the Hydrobiological Laboratory of the Czechoslovakian Academy of Sciences, Prague, was the first in our field to discover the importance of consumers (fish) in the control of herbivores (*Daphnia* sp.) and primary producers (algae). In 1958 he read a paper at the International Zoological Congress in London entitled "Density of the fish population as a factor influencing the distribution and speciation of the species in the genus *Daphnia*." He showed that small temporary ponds on the floodplain of the Elbe lacked fish and supported a population of large-bodied *Daphnia*. Nearby oxbows and permanent ponds, occasionally flooded by waters from the Elbe, contained abundant fish populations, and supported populations of quite small *Daphnia*. The water here was opaque with algae (and sediment), a condition labeled "eutrophic" by limnologists, in contrast to the clear water of the *Daphnia*-filled temporary ponds, which would be called "oligotrophic." By poisoning the fish in one of the eutrophic ponds, he discovered that when the system recovered, the dominant zooplankton was a large-bodied *Daphnia* and the water was relatively free of algae. Both the quantitative composition of the plankton and the "nutrient status" of the pond were under biological control by the fish. This was heretical to classic limnologists, who saw oligotrophy or eutrophy as states determined largely by the availability of inorganic nutrients.

Subsequently, ecologists have recognized the importance of Hrbáček's observations and creative interpretations which have enriched our understanding of aquatic ecosystems; J. L. Brooks and S. I. Dodson's (1965) significant paper recognized the importance of



Hrbáček's pioneering investigations. The creative ideas he first verbalized are apparent in the works of Brocksen et al. (1970), Henriksen et al. (1980) and more recently in Shapiro and Wrights' (1984) biomanipulation studies and Carpenter et al.'s (1985) trophic cascades. Hrbáček's contribution permeates present attempts to understand and manage lake ecosystems.

Jaroslav Hrbáček was born on 12 May 1921 in Brno/Moravia, Czechoslovakia. He enrolled as a student of medicine at Charles University in Prague. Schools were closed during the German occupation, but he found a job in a pharmacy and collected waterbeetles on weekends and holidays. After the war he decided to become a high school teacher in natural sciences and began to study the respiration of waterbeetles (Hydrophilidae) under Dr. J. Komárek. For this work he received in 1948 a degree of "Rerum Naturalium Doctor" and obtained a position in the Department of Hydrobiology. In 1952 he was named Docent and began the studies for which we know him so well. In 1959 he became head of the Hydrobiological Department of the Biological Institute of the

Czechoslovak Academy of Sciences, which later became the Hydrobiological Laboratory, with the responsibility to study the limnology of man-made lakes as a basis for their management. He continued to relate the differences among and the temporal changes within reservoirs to differences in their fish populations; for this work he received a Doctor of Sciences in 1985. He also made important contributions to the systematics of *Daphnia* and to our understanding of cyclo-morphosis in *Daphnia*.

Jaroslav Hrbáček was scientific secretary of the Czechoslovak National Committee of IBP and helped shape UNESCO's Man and the Biosphere program (MAB). He lectured for one semester in 1968 at Indiana University, received the D'Anconca medal for the study of Cladocera, the silver Mendel medal of the Czechoslovak Academy of Sciences, the Naumann-Thienemann medal de limnologia optime merito, and the silver badge of the Faculty of Natural Sciences of Charles University in Prague.

Dr. Jaroslav Hrbáček's nomination for Honorary Membership in the Ecological Society of America was supported by letters from J. L. Brooks, S. I. Dodson, T. L. Edmundson, and D. G. Frey. In a recent letter to John Brooks, Dr. Hrbáček writes, "I do not feel any change after my retirement except lower income and lack of secretarial help."

Written by John J. Magnuson

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