Acta Soc. Zool. Bohem. **87**: 195–199, 2024
ISSN 2788-1369 (on-line)
ISSN 1211-376X (print)

Karel Pivnička – 80th Birthday

In the previous year, we celebrated the 80th birthday of Karel Pivnička, one of the leading persons of Czech ichthyology. Karel was born on 23 April 1943 in Klatovy (then in the Protectorate of Bohemia and Moravia). He graduated from the 11th year school, which at that time was the three years remainder after the Austrian and the Czechoslovakian First Republic grammar schools. His parents taught at the Business Academy in Trenčín (now in Slovakia) and from 1939 in Pilsen. They respected education and independent assessment of everything we encounter in life. Both were born in Vienna. Experiences from Vienna, from the First Republic, the war years 1939–1945 and the post-war period, influenced his son essentially.

In 1960–1965, Karel proceed at the Faculty of Sciences of Charles University, studies finished with the state exams in chemistry (1964) and biology (1965). In his diploma thesis (1965) *Variability of Morphological Characters of the Burbot*, *Lota lota* (*Linnaeus*, *1758*), he studied specimens from the whole Holarctic region using his own and literature data.

After a short job at the Kašperské Hory Museum in 1966, he started a three years post-graduate course at the Department of Zoology of the Faculty of Science under the supervision by Professor Ota Oliva. The topic of the candidate's thesis was the study of abundance, growth, mortality and production of fish in the Klíčava Reservoir (Central Bohemia) during 1967–1970. The topic was related to the International Biological Program, especially the part related to stagnant waters managed by Professor Jaroslav Hrbáček. The thesis brought a new perspective on previous abundance estimates, on growth studies of fish, their mortality, birth rate and production. The research activities at the Klíčava Reservoir then continued until 1999. During his postgraduate studies, Karel Pivnička, together with Karol Hensel from the Comenius University in Bratislava, Slovakia, undertook a three-month study trip to Mongolia (1969). The University of Ulaanbaatar organized for them two stays, one in the area of the Darchad Basin and the upper Yenisei Basin, the other in northeastern Mongolia, to the Cherlen and Onon Basins. The result was a large amount of fish material, brought to the universities of Prague and Bratislava and giving basis four publications.

In 1969, he passed a rigorous exam and defended the rigorous thesis *Contribution to the systematics of some Holarctic fish species*, the Rerum Naturalium Doctor title he obtained in November 1969 and the degree of Candidate of Sciences (CSc.) in December 1972. After it, he continued to work at the Department of Systematic Zoology.

In 1980, he moved from the Department of Zoology to the Department of Environmental Protection and Landscape Ecology at that time under the leadership of Professor Jan Čabart. In

his new workplace, Karel switched his interest to the general and applied ecology and the practical connections of both of them. He lectured General Ecology, later on Applied Ecology and Environmental Protection. In 1981, he published the textbook *Ecology of Fish*, in 1984 textbook of *Ecology*, and in 1988 together with Dr. Vladimír Habětín and Dr. Marie Pivničková textbook of *Nature Conservation*. Finally in 1992 he, together with Professor Martin Braniš published the textbook *Introduction to the Study of the Environment* and in 2002 the textbook *Applied Ecology*. Thanks to it, he gained overall ideas of the functioning of nature influenced by man.

Karel Pivnička in the middle of Miroslav Švátora (left) and Josef Křížek, marking fish in the Berounka River near Hřešihlavy, in 2003.

In July 1986, he was appointed as associate professor for environmental protection. However, the title was not valid after 1989, as it was not connected with the habilitation thesis defense. His habilitation theses *Long-term sustainability of ichthyocenoses in man-made lakes* he submitted in 2000 and in the same year he was appointed as associate professor of ecology at the Faculty of Forestry (Czech University of Life Sciences in Prague). On the same university, he was designated as a professor of General and Applied Ecology in 2003.

In 1988, Karel Pivnička completed his doctoral dissertation and received the title of Doctor of Biological Sciences DrSc (1989). The title of his dissertation thesis was *The Influence of Ecological Factors on the Dynamics of Fish Communities in Valley Reservoirs* based on a 40-year study of the fish community in the Klíčava Reservoir with an extension to other reservoirs in the Czech Republic and the Northern Hemisphere. The first chapter evaluated the selectivity of the most used fishing gear (gillnets) against trawl nets. With the knowledge of the selectivity of the fishing nets, the results of the length and age composition of the most frequently caught fish species (roach, pearling, walleye) were adjusted. In other chapters, the survival and mortality of fish, their abundance, growth rate, formation of new years, production and yield in the Klíčava Reservoir and other reservoirs were evaluated. The main topic response in evaluation of the effect of changes in the abundance of dominant fish species on their growth and on the growth of other species and the possible regulation of abundance, growth, birth rate and mortality by reducing or increasing the catch. In the last chapter, with the help of a simple mathematical model, data on the stocking and catches of carp in the Hostivař Reservoir in Prague were used to quantify the influence of stocked carp on the local fish community and on the stocked carp themselves.

A summary of the results on the Klíčava Reservoir was published in a special volume of *Acta Universitatis Carolinae Environmentalica* **15** (2001, editors V. Straškrabová & K. Pivnička). Publication was dedicated to Jaroslav Hrbáček, Ota Oliva, and Milan Straškraba.

From the beginning of the 1990s, Karel Pivnička studied fish communities in small watercourses, and in the case of larger streams, in their upper reaches. Only the Berounka River with its 14 m^3 per sec of average flow between the localities of Liblín and Hřešihlavy, was an exception. In these studies, the species diversity of fish was evaluated depending on some measurable parameters (flow fluctuation, water quality, nature of the basin) and, in the case of the Berounka River also the intensity of fishing. The next questions of these studies were how many species, which species, and in what abundance and biomass they are found in the given areas and whether it is possible to predict the species composition and representation of individual fish species in streams. The fish saturation index was evaluated, i.e. the expected number of species and their representation in localities sorted by their distance from the source. In the localities of Liblín, Třímany, and Hřešihlavy (Berounka River) the abundance and biomass of important fish species (roach, bream, walleye) and environmental factors (water quality NH_4^+, Cl^- and the number of carp caught) were studied using the CANOCO program. Selected factors significantly affected the fish community living there.

Karel was always active member of the Czech Zoological Society, especially in its Ichthyological Section. After his retirement, he scanned for the Society numerous volumes of its journal *Věstník Československé Společnosti Zoologické* / *Acta Societatis Zoologicae Bohemicae*, from its beginning in 1927 till 2002, representing a big help in the Society presentation. We wish him to enjoy his personal life, good luck, and stay healthy for a long time.

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