



Rauno Ruuhijärvi

* 4.9.1930 † 18.6.2022

A mire research virtuoso and conservationist with a thorough understanding of peatland processes, Professor Rauno Ruuhijärvi was one of the most renowned Finnish natural scientists, a teacher of several generations of biologists and an influential figure in many organizations and in public life both in Finland and abroad. His versatile and talented life's work spanning several decades on behalf of Finnish nature is among the most impressive careers of our time.

Professor Rauno Ruuhijärvi died of rapidly advancing cancer at the age of 91 at his home in Vantaa on 18 June 2022. He was born on 4 September 1930 in Hankasalmi. The family soon moved to Kauhava where Ruuhijärvi spent his childhood and adolescence. The vast open landscape of Ostrobothnia, hiking with friends and a summer spent digging gold in Lapland as an upper secondary school student with his teacher sparked an interest and a love for nature.

Ruuhijärvi started studying natural sciences at the University of Helsinki in 1951. He ended up choosing botany as his major and wrote his doctoral thesis on mire vegetation and regional division in Northern Finland. The ideas of the thesis and an awareness of the endangered nature of mires matured further in the vast expanses

of Sompio where he led nature surveys in the Lokka reservoir area in the summers from 1958 to 1960.

Ruuhijärvi's doctoral thesis was part of Professor Aarno Kalela's large project examining the regionality of forest and mire vegetation in Finland. Kalela was bothered by the difference in principle in the regional divisions of forest and mire vegetation described by his father A. K. Cajander. Mire complex types based on the morphology of the terrain on the one hand and caused by the climate on the other had been identified. In addition to raised bogs, aapa mires and palsa mires, there was a Karelian mire complex type in Central Finland and a slope mire complex type in the region of Kainuu and Kuusamo. In addition to Ruuhijärvi, others who wrote their doctoral theses on mires for the project were Seppo Eurola (vegetation and regional division of mires in Southern Finland), Paavo Havas (ecology of slope mires), Pekka Isoviita (taxonomy of bog mosses) and Yrjö Vasari (history of vegetation in the Koillismaa region). They all went on to become exemplary professors.

Rauno Ruuhijärvi taught plant ecology as an assistant professor at the University of Helsinki from 1963 onwards. Field

courses were held at the Lammi Biological Station, where he worked as supervisor for more than 30 years. Ruuhijärvi also organized memorable excursions to Lapland and Northern Norway. He led research projects on aquatic, peatland and forest ecology and supervised dozens of doctoral and other theses. It was essential for the understanding and conservation of Finnish nature that he launched university education in nature and environmental protection in the 1960s and maintained it all the way until his retirement.

His administrative duties naturally expanded to include positions of trust in the Ministry of Education, as plans were being made for the universities of Jyväskylä and Joensuu and academic degrees were reformed in the 1960s and 1970s. He also served as the first chairman of the Central Research Council for Environmental Science at the Academy of Finland and a member of the Central Research Council for Science 1986–1989, and as Vice Dean and Dean of the Department of Mathematics and Science at the University of Helsinki until he retired in the 1990s.

Ruuhijärvi's voluntary conservation work began as secretary of the research council for the dam reservoirs of Kemijoki under the Finnish Association for Nature Conservation and as leader of the scientific field studies 1958–1960 at the Kemihaara bogs in Pelkosenniemi. The Supreme Administrative Court ruled against the Vuotos reservoir project in autumn 2002. In addition, Rauno was a key expert involved in the conservation efforts of Ounasjoki and Kyrönjoki and in preparing the programme on the protection of rapids, since he was a pioneer especially in scientific research concerning northern dam reservoirs. Consequently, the plans to build

reservoirs were cut back or rejected entirely.

Systematic mire protection began in Finland when Ruuhijärvi was chairman of the Mire Conservation Committee of the Finnish Association for Nature Conservation and the Finnish Peatland Society 1965–1972. The first major mire conservation plans were prepared for state-owned peatland, which was protected mainly under the decisions of the Finnish Forest Administration (Metsähallitus). After this, mire conservation efforts expanded to systematic surveys of the natural state and biodiversity of mires. Consequently, the mire conservation working group of the Ministry of Agriculture and Forestry drafted a national basic mire conservation programme 1976–1982 and the Government made a decision in principle concerning the implementation of the programme.

The evaluation method for protected mires, developed by the Mire Conservation Committee, was ahead of its time. Since it has been published only in Finnish, it is not very well known around the world. The idea was to list the mires in order from best to worst for the purpose of protecting them. This was done using basic criteria for mire complexes and supplementary criteria. The basic criteria were the representativeness, size and natural state of the mire complex and the number of mire types and nesting marsh birds. Supplementary criteria were the occurrences of endangered plants and animals, berry picking potential, the use of the mire in teaching and research and the mire landscape. Each criterion was given a score and the scores were added up to reveal the order of conservation importance. As a result of this first mire conservation plan, some 600 mires were protected with a total area of c. 500 000 hectares.

When conservation activities became a branch under the Ministry of Agriculture and Forestry in 1972, Rauno gradually became a trusted expert in over 30 teams, councils and committees of the Ministry of Agriculture and Forestry, the Ministry of the Environment, the Ministry of Trade and Industry and the Prime Minister's Office, where the establishment of nature reserves, research and environmental conservation issues were frequently discussed over several decades.

Due to the weakness of environmental administration, for a long time the Finnish Association for Nature Conservation (FANC) had many official-type duties in terms of environmental instruction, public information and environmental education. Ruuhijärvi has been the longest-standing chairman of FANC, from 1978 to 1990, and was later the honorary chairman of the association. During his era, the appreciation for and influence of FANC reached its peak. Some of the major national environmental questions and key areas of advocacy for Ruuhijärvi in these years were the struggle to establish the Ministry of the Environment, influencing Parliament and legislation, establishing mire conservation areas and national parks, reorganizing the Water Administration and cooperation with WWF Finland.

FANC was the first civic organisation to receive the Medal of the Parliament of Finland. The cultural and social significance of nature reserves was also considered immeasurable.

Conservation work continued in Ruuhijärvi's retirement in groups for the protection of forests and mires at the Finnish Environment Institute and as part of a Finnish-Russian nature conservation working group. His last publications dealt with the

ecological state of palsa mires in Fjeld Lapland and the rich birch fens in the aapa mire area. His article on palsa mires in the journal *Suo – Mires and Peat* presents an excellent overview of the occurrence of different palsa mire types (palsa mounds and palsa plateaus) and their thawing (major impact) and formation (minor impact).

In 1978–1985 Rauno contributed to the work of the nature conservation working group as a member of the cooperation commission for environmental conservation between Finland and the Soviet Union. This work continued as chairman of the Finnish partner of the nature conservation working group under the Ministry of the Environment 1986–2002. Ruuhijärvi was the most renowned and respected Finnish figure among Russian conservation authorities and researchers in the 1990s and 2000s.

Rauno Ruuhijärvi enjoyed photography, loved literature and was familiar with classic works of poetry and visual arts. He retained his brilliant memory and his ability to discuss and debate issues until the very end of his life.

He married his coursemate Liisa Tenhunen in 1956, and they had three sons between 1958 and 1965. The family built a home in Korso in 1964. After his wife passed away, Rauno continued to live there by himself. Rauno's grandchildren and great-grandchildren were very dear to him. They could enjoy their 'Pappa's' warm embrace, stories and sweets from the candy cupboard both at the cottage in Padasjoki and in Korso. Relatives also enjoyed the hospitality of Rauno and Liisa. The couple visited almost 80 countries together, for example on summer excursions for biology and geography teachers. Around Christmas, relatives had the chance to see

and hear a slide show prepared by Rauno and Liisa about their summer trip to some exotic corner of the world.

Let's return once more to that summer spent searching for gold in Lapland, which would have a major impact on Rauno's future. Did he find gold? Yes, some; he had a piece of jewellery made from it for his wife Liisa, but a burglar stole it from their home in Korso. So the gold that Rauno found in the golden lands of Lemmenjoki continues its eternal cycle!

Another incident in Lapland that left a mark on Rauno's mind was when he suddenly realized he had walked right into the middle of a landmine field built by the Germans. Should he go back or continue to the other side of the field? Rauno was always a forward-looking thinker and this time was no exception: he walked on cautiously and managed to escape unscathed. The experience made him opposed to landmines and he supported the Ottawa Treaty to ban them.

Rauno Ruuhijärvi received a number of awards for merit and recognitions for his work: the UNEP Global 500 Award, the Alfred Kordelin Foundation Prize, the Maj and Tor Nessling Foundation Environmental Prize, honorary award of the Finnish Cultural Foundation, award of WWF Finland, title of doctor honoris causa from the University of Joensuu, golden badge of merit from Metsähallitus and the Finnish Association for Nature Conservation, and honorary membership of the Finnish Peatland Society and honorary chairmanship of the Finnish Association for Nature Conservation. He became a member of the

Finnish Academy of Science and Letters in 1993.

The city of Vantaa established a 53-hectare nature reserve in Korso in honour of Rauno Ruuhijärvi's 90th birthday on 4 September 2020 and named it the Rauno and Liisa Ruuhijärvi Forest.

Rauno died on a Saturday morning in his own bed. I was with my students at the time, exploring Icelandic biogeography, peatlands, bog mosses, afforestation etc. At the time Rauno passed away, we were on the cliffs in central Iceland, watching seabirds with our binoculars. I especially recall a small puffin population made up of a couple dozen birds. It was as if Rauno had said his goodbyes to me as a puffin. Comparing Rauno to a puffin may sound odd at first. But like a puffin, Rauno was at home in different environments: the puffin in the water or up on the cliffs or in its burrow – Rauno in the wilderness in his hiking outfit or giving a statement to the government or attending international meetings. Just as the puffin can carry multiple fish in its beak to feed to its chicks one by one, Rauno, too, had multiple projects on his mind that he worked on whenever he had the chance. The fish were not necessarily eaten in a chronological order, but whenever the opportunity presented itself. He also shared his ideas with his students, just like a puffin feeds fish to its pufflings. As an environmental researcher and conservationist, Rauno possessed quick reactions and a clear direction, which gave him a great head start. That is why he was always one step ahead of everyone else and was not easy to overtake.

Harri Vasander

Photo: Personal photo archives
of Rauno Ruuhijärvi