



Peitsa Mikola

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PEITSA UNTAMA MIKOLA (Mikkola until 1937) was a town boy by birth, as his parents were Juho Mikael Mikkola, counselor of education and lecturer at the Jyväskylä Teachers' Seminary, and Fanny Maria Mikkola, née Sirén. The family's older boys were already enthusiastic young naturalists, and Peitsa followed suit with his interests in nature and forests. Unfortunately, however, the Jyväskylä Lyceum did not yet have a separate nature club, nor, according to Mikola, was the teacher of natural sciences capable of inspiring pupils to take an interest in the subjects he taught.

After passing his student matriculation examination in 1934, Mikola had various career options open to him, but it was still the natural sciences and the forest sector that seemed most attractive. In any case, a career in research, if not in forestry, then at least in something related to it, was virtually a foregone conclusion from the outset. As it turned out, Mikola's academic mentor, Associate Professor Martti Tertti, at that time the university's forester, was looking for a young graduate or advanced student to act as an assistant to Risto Sarvas, who was responsible for a project involving the in-

spection of private forests spoiled by inappropriate felling. "I couldn't have wished for a better job," he remarked later when recalling how he had begun his research career.

Peitsa Mikola gained a master's degree in forestry in 1938, but the following year the political situation in Finland began to deteriorate, and on his 24th birthday, 15th October 1939, he received a notice to report for additional military exercises. Second Lieutenant Mikola then spent the whole of the Winter War of 1939–1940 in charge of a coastal artillery battery on the island of Rankki off Kotka. "It was then that I was able to be of most use to my country," he commented years later when recalling those bitter times. He nevertheless retained his patriotism and interest in the national defence in later years and took part in various kinds of work on behalf of war veterans.

Immediately in 1940 Mikola took up a position of instructor in forest mensuration at the University of Helsinki which lasted for four years, ending somewhat abruptly on account of a difference of opinion with the professor of this subject, Erik Lönnroth. Mikola had revised the duplicated instructions for fieldwork

drawn up by Lönnroth in 1919–1920, which annoyed the professor, so that Mikola found it best to retreat discreetly to the Institute of Forest Research, where he became an assistant to Professor Yrjö Ilvessalo. The professor also immediately gave him a topic for his doctoral thesis, the effects of weather conditions on tree growth, a matter of some importance for the national inventories of forest reserves for which Ilvessalo was responsible.

In 1946 Mikola left to spend just over a year as a student of Elias Melin, a well-known specialist in root fungi, or mycorrhiza, at Uppsala University, and it was during this time that he completed his doctoral thesis, on the physiology and ecology of the black *Coenococcum graniforme* mycorrhiza that lives in symbiosis with birch roots. This was the first mycorrhizal research to be published by a Finn when it appeared in 1948, after which the young scientist was able to concentrate on publishing his work on variations in tree growth brought about by meteorological factors. This was a theme that he was to fill out on a number of occasions later, especially as far as pines growing close to the forest limit were concerned.

In 1950 Peitsa Mikola became one of the first Finnish recipients of an ASLA scholarship for study in the USA. This enabled him to visit the laboratory of the famous Russian-born expert on forest sites, S. A. Wilde, at the University of Madison, Wisconsin, where he continued his mycorrhizal studies and considered more generally the uptake of nutrients by forest trees.

On returning home from America he continued his work in forest biology by examining the decomposition of forest

litter and the biology of forest humus, having been awarded a senior research position at the Institute of Forest Research. At the same time he widened the scope of his work by studying the cultivation of saplings of forest trees in Finnish nurseries. Then, in 1953, he took over the position of university forester, which entailed teaching the fundamentals of forest management in Helsinki during the winter and arranging summer courses in the subject at the university's Hyttiälä Field Station in Juupajoki. This was challenging work, but being a person who was used to working independently, it gave him an opportunity to continue with his own research as well. In his teaching, Mikola's wide experience and sound knowledge of forest management soon raised him to the ranks of the most competent instructors in the country, and he was much admired among the students for his excellent memory. It was said that he only needed to set eyes on a new student once at the beginning of the field-work season in spring to remember that name infallibly for the rest of that person's career. Mikola also succeeded in having a new building constructed at Hyttiälä for teaching purposes, containing a spacious laboratory, a lecture room and a library, to supplement the existing log cabins dating from around 1910.

Hiking and skiing had been Peitsa Mikola's favourite occupations ever since his childhood, and he never ceased to be attracted by Lapland and its countryside, which also implied a keen interest in nature conservation. He joined the Finnish Association for Nature Conservation in connection with its foundation and was its secretary in 1946–1950. He had already studied numerous valuable ancient

forest sites in various parts of Finland in the course of his tree growth research, and many of the new national parks and nature reserves established in 1956 were based on suggestions that he had made to the Finnish Society of Forest Science or papers that he had published in forestry journals.

Mikola was appointed to a personal professorship in forest biology in 1957 and held that position until his retirement in 1978. In the course of his tenure he acted as the official examiner in eight doctoral disputations and held two-week courses in Northern Finland for students of forestry during ten summers, introducing these future foresters to the exceptional principles and problems involved in forest management in Lapland.

Alongside these duties, Mikola continued with his own research, but in more favourable circumstances. In particular, the scholarships from the USA that were paid out to him in Finnish marks made it possible for him to employ a number of research assistants to work in the Hyytiälä Field Station's new laboratories. Some of his mycorrhizal papers were published jointly with colleagues and/or students, but the vast majority of the reports based on research carried out in Finland appeared exclusively in his own name. It was from the 1980s onwards that he began to acquire an international reputation.

In the late 1960s the scope of Mikola's writings expanded rapidly from nature conservation to encompass the diversified use of forests, environmental management, land use planning and general aspects of the controlled and sustainable use of natural resources. Within the University of Helsinki he strongly advocated

the creation of a chair in environmental conservation, and when no progress was forthcoming he began to provide teaching in this subject within his own lectures.

Peitsa Mikola's list of publications runs to more than 400 titles, among which some 180 reports or conference publications could be termed 'scientific' in the strictest sense. In addition, he was involved in the editing of a few large collected volumes of papers.

Where scientific societies were concerned, Mikola was chairman of the Finnish Society of Forest Science for two years and of the Geographical Society of Finland for one year. He was elected to membership of the Finnish Academy of Science and Letters in 1973 and of the Finnish Society of Sciences and Letters two years later.

Mikola was granted an André Mayer Scholarship by the FAO in 1967, which enabled him to undertake a voyage around the world collecting data on the significance of forest tree mycorrhizae for the afforestation of naturally unfor-ested areas. Prior to that time he had visited or attended conferences mainly in European countries, and this journey provided him with his first opportunity to look into the biological problems associated with the planting of forests in tropical regions. Later the International Union of Forest Research Organizations (IUFRO) and the International Foundation for Science (ISF) both invited him to join their panel of experts on mycorrhizae, which allowed him to make visits of varying lengths to countries such as India, the Philippines, Indonesia and Malaysia. A number of Finnish instances subsequently availed themselves of his expertise

when considering the financing of forestation projects in Kenya, Nigeria, Iran and Sri Lanka, for instance. Even in 1985 Mikola was still being asked to assess FINNIDA-financed projects in the Sudan.

All in all, the work done by Peitsa Mikola may be said to have been valuable on three scores in particular: he was a pioneer in his own field of forest biology in Finland in the 1940s, he added an inter-

national dimension to Finnish research, and finally, he was able to influence the practical decisions reached in the forest sector in regions such as Latin America, tropical Africa and southern Asia. In the light of this it would seem quite natural for the volume published in October 2015 for the seminar held to mark his 100th birthday to have been entitled "The Forest Biologist of the Century".

Obituary by Matti Leikola

*Picture: Erkki Oksanen /
Natural Resources Institute Finland*