

## Karl Orviku 100



The last century has witnessed two very similar crucial periods in the history of Estonian geology when most of the staff active in geology was lost due to war and political changes. In 1918–1925 Hendrik Bekker was the promotor of new developments. In 1945–1968 Karl Orviku put a decisive effort in the restart of geology at the University of Tartu, and foundation and development of the Institute of Geology of the Estonian Academy of Sciences.

Karl Orviku was born in Kohtla village, NE Estonia, on 17 August 1903. He was educated at Erra-Liiva and Rakvere schools. In 1922–1930 he studied at the University of Tartu from which he graduated with a master's degree in geology (MSc thesis *Beiträge zur Kenntnis der Aseri- und der*

*Tallinna-Stufe in Eesti*). His interest in geology showed itself while he studied at school in Rakvere where he was inspired by Artur Luha, his teacher and a later member of the Estonian Academy of Sciences. For many years (1931–1944) Orviku was involved as an assistant and lecturer in research and teaching at the University of Tartu. He was an active member of different societies, including the Estonian Naturalists' Society (1946–1952, president), the first editor (1933–1935) of the society's magazine *Eesti Loodus* (Estonian Nature), and a member of the Estonian Geological Committee (1937–1940). Several research visits to Denmark, Poland, Germany, Sweden, and an expedition to Greenland in 1937 promoted scientific co-operation and broadened his views in geology.

After the defence of his doctoral thesis *Lithologie der Tallinna-Serie (Ordovizium, Estland)* in 1940, Orviku was awarded the degree of *dr. phil. nat.* Since the political status of the Republic of Estonia was soon changed, re-examination of the thesis was required. It was completed after the Second World War, in 1946, and Orviku was awarded the corresponding (Soviet) degree – Doctor of Geology and Mineralogy – and nominated to the position of Professor of Geology. In 1944–1956 he was the Head of the Geology Department at

the University of Tartu. As there was a shortage of well-trained geologists in Estonia, his assistance was highly needed in establishing a new geological institution in Tallinn – the Institute of Geology (at the Academy of Sciences of the Estonian SSR). In 1947 he became the institute's Deputy Director for five years. In 1946 the Estonian Academy of Sciences was re-established and Orviku was nominated its Corresponding Member. In 1954 he was elected Full Member and became Director of the Institute of Geology of the Academy of Sciences of the Estonian SSR.

The late 1950s–1960s is a period of great changes in Earth sciences in Estonia. Orviku was actively involved in research development. He was a member of different committees and commissions, such as the Executive Committee of the International Union of Quaternary Research (INQUA) – 1961–1965; the Commission of Neotectonics of Baltics; the Estonian Committee of Meteoritics; the Committee of Stratigraphy, the Commission of Quaternary Research, and the Commission of Geomorphology of the Soviet Union. His efforts in the development of Estonian Earth sciences during Soviet time were recognized by a number of different state awards. He was elected honorary member of the Estonian Naturalists' Society (1963) and Estonian Nature Conservation Society (1972), and awarded the honorary title of merited scientist.

Orviku was a great organizer of Earth sciences and research development in Estonia and a productive researcher and publisher. His interests covered most of geological research fields in Estonia; in a number of fields he was a pioneer and research initiator. His studies (published in a total of 218 papers) involved Quaternary geology, stratigraphy and lithology of Palaeozoic rocks, palaeontology, applied geology, geomorphology and dynamic geology, hydrogeology, meteoritics, neotectonics, marine geology, history of geology, and other topics. He guided the publication of the monograph *Geology of the Estonian SSR*. Investigation of interglacial deposits at Rõngu and Karuküla, tills, and the structure and formation of drumlins, as well as works on the lithology and lithostratigraphy of Ordovician and Devonian rocks serve as Orviku's significant contribution to Estonian geology.

Apart from his Palaeozoic and Quaternary studies, Orviku was the initiator of the protection of non-living nature far before other people started to think the rocks needed protection. His numerous papers changed the attitude of people towards the natural heritage.

Karl Orviku died in Tallinn on 3 March 1981. Estonian people highly appreciate his contribution to the development of science and education. In 1991 he, as a team member, was posthumously given the state science award for the book *History of Geology in Estonia* (1986). He is listed in the book *A Hundred Great Estonians of the 20th Century*.

The present issue of the *Proceedings of the Estonian Academy of Sciences, Geology* is dedicated to his memory.

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and Dimitri Kaljo