



**PROFESSOR HEIKKI JUHANI SIMOJOKI — 75 YEARS OLD
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by

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Professor emeritus Heikki Juhani Simojoki celebrates his 75th birthday on 22 January 1981. To do honour to his life's work the Geophysical Society of Finland is dedicating this volume of *GEOPHYSICA* to him.

Professor Simojoki, the son of a dean, was born on 22 January 1906 in Tornio. He passed his matriculation examination in Kuopio in 1926. He took the degree of Master of Science in 1931, and his doctor's thesis, which bore the title "Über die Eisverhältnissen der Binnensee Finnlands", was published in 1940.

Professor Simojoki's scientific career began at the Finnish Meteorological Office in 1931. Later on, after serving as a schoolteacher in Kuopio, he joined the Institute of Marine Research in 1945. There he had different duties. The most important of these were the posts of head of the Ice Department and the Hydrographical Department. In 1956 he entered the Finnish Meteorological Office as the head of the Division of Climatology; two years later he became head of the Hydrological Office. In addition to his other duties he also served as a docent in geophysics at the University of Helsinki.

In 1967 he was appointed to the newly-founded post of professor of geophysics at the University of Helsinki, which he held until his retirement in 1972. Professor Simojoki's extensive and varied experience, obtained through duties at research institutes and school teaching, contributed greatly to his work as lecturer in geophysics and as the founder of the Department of Geophysics and the University of Helsinki.

Professor Simojoki's extensive scientific activity covers several fields of the geophysical sciences. His earlier publications deal with and give several new results on ice conditions and winter water temperatures in Finnish lakes, with special emphasis on the differences caused by the geographical position, width and depth of the lakes, and on the effect of ice cover on heat balance. He has studied water level variation in open and ice-covered lakes observing both short-term variations and long periods lasting for decades, *i.e.* the rhythms. Both of these research topics have had a significant influence on later studies.

Besides his studies of lakes, Professor Simojoki has devoted much of his time to studies of the physical properties of the Baltic Sea. His findings on Baltic Sea evaporation have comprised material for comparison between later results calculated by different methods. Increasing winter navigation, for example, has made use of his studies in developing more effective forecasting of the time of freezing. He has made calculations of river inflow to the Baltic Sea and on his initiative studies of the water balance of the Baltic Sea were included as an international project in the programme of the International Hydrological Decade. All the countries around the Baltic Sea are now engaged in a joint water balance study.

Professor Simojoki has presented valuable results on snow, its melting and

the effects of melt on waters. These studies also include his observations on river ice jams during floods.

In his climatological investigation Professor Simojoki has focused the attention on long rhythmic variations. He has pointed out that the rhythmic water level variations in Lake Saimaa over 30 years are connected with the rhythm of precipitation.

The latest extensive paper by Professor Simojoki was published in 1978, and deals with the history of geophysical research in Finland from 1828 to 1918. This work covers the whole range of the geophysical sciences and as it is very comprehensive it called for great skill and zeal on the part of its writer. The list of references comprises original papers, manuscripts and letters.

All in all, Professor Simojoki's published works cover a wide range of subjects related to oceanography, hydrology and meteorology. His approach to these subjects is often empirical, although it is based on thorough knowledge of the theories behind the processes. His research is characterized by critical attitude toward methods and data, so the results obtained are reliable. His early interest in meteorology and the hydrosphere was evident even when he was schoolboy; he ordered a rain gauge from the Finnish Meteorological Office and promised to make observations.

When he acted as the head of the Ice Department of the Institute of Marine Research, Professor Simojoki undertook many significant studies, *e.g.* on the strength of sea ice and the interaction between weather and ice fields, and these have played an important role in the advance of winter navigation. His influence on the development of the Hydrological Office was great. Under his leadership the basic data network, field working facilities and research activities, especially, were greatly improved. He was particularly occupied with studies of water balance and evaporation. Hydrological forecasts for different practical purposes were also started at this period.

Professor Simojoki has greatly promoted cooperation between different scientific fields; he has served as vice-president of the Surface Water Committee of the Hydrological Association of the IUGG, has taken part in preparation on the programme for the International Hydrological Decade on the international level, and acted the first chairman of the Finnish National IHD-Committee.

Further, he has actively participated in the work of several scientific societies, including the following: the Geophysical Society of Finland, the Academia Scientiarum Fennica, the Societas Scientiarum Fennica, the Physical Society of Finland, the Limnological Society of Finland, the Geographical Society of Finland, the Societas International Limnologiae, and the American Geophysical Union.

Almost all Finnish geophysicists today have studied under Professor Simojoki's guidance, because the planning of geophysical studies at the University of Helsinki became his responsibility as early as 1948. His students will well remember his approach to teaching in particular, it concentrated mainly on the most essential question of the hydrosphere and on a critical physical survey of different processes. His teaching, however, was never a mere collection of facts; it instead arose out of his broad outlook on life and fine sense of humour.

On the occasion of Professor Simojoki's 75th birthday the Geophysical Society of Finland wishes to express its best wishes and extends its thanks to Professor Simojoki for his great contribution to geophysical research and for his work in advancing the teaching of geophysics in Finland. The contributors to the present volume of *GEOPHYSICA* also express their best wishes.