



Professor L. Starkel

(September 1931 - November 2022)

Eminent geomorphologist and Quaternary scientist Leszek M. Starkel, Professor at the Institute of Geomorphology and Hydrology, Polish Academy of Sciences (PAS) Krakow, Poland, passed away on November 6, 2021. A person of wide international reputation, Prof. Starkel was deeply involved in research in geomorphological mapping, relief evolution and river valley development of Polish Carpathians, and the Palaeo-hydrology of the late Quaternary Poland. A person deeply interested in India, he was also a leading scientist in researches on the Himalayas and on relief forming processes in various climatic zones of North East India. He continued to work vigorously and passionately on geomorphological problems in various parts of the world till he took his last breath. He was a little over 90 years at the time of his death.

Prof. Starkel spent his childhood in Debia, a small town on the Wisloka River at the edge of the Polish Carpathians, the northernmost mountain range of Alpine orogenic system. His curiosity of the science of landform development of Carpathian played a great role in developing in him a keen interest in geomorphology of Polish Carpathians. The famous research monograph on 'Paleogeography of the temperate climate zone over the last 15000 years' published by Prof. Starkel bears testimony to his scholarship that brought much appreciation and recognition to him as a great scholar. His amazing academic contribution earned him the much-coveted honorary fellowship of INQUA and the Gold Founder Medal of the Royal Geographical Society.

Born in Starachowice, Poland on September 8, 1931, Professor Starkel graduated in Physical Geography at Jagellonian University, Krakow in 1954

and continued to pursue his doctoral work. He was awarded Ph.D. in Geomorphology at the Institute of Geography, PAS in 1959. He was a Post-Doctoral Fellow in the UK. He was elected as 'Corresponding' member of the PAS and became 'full' member of the Academy after 15 years of receiving the title of 'Extraordinary Professor' in 1971. In the meantime, he was appointed Professor in the newly formed Department of Geomorphology and Hydrology at the Institute of Geography, PAS located at Krakow.

A scholar of varied interests and pursuits, his main research investigations are not limited to geomorphology of Poland but extended to the young Quaternary forms of Asian Mountains such as Latitudinal Zonality of Geo-ecosystems in the Continental Asia, typology and evaluation of natural environment, fluvial evolution in young orogenic system, present-day relief processes at the foot of Himalayas (Darjeeling area, India), degradation and creation of new equilibrium of geo-ecosystems in Meghalaya.

Universally acclaimed as one of the outstanding Palaeo-geographers of Europe, Prof. Starkel successfully established himself as the leader of various scientific committees. He was Chairman of Quaternary Research Committee of PAS (1979-1992), Chairman of Polish IGBP Committee (1990), Deputy President of Krakow Branch of PAS (1999-20020) and also the member of the State Committee for Scientific Research.

Research Persuasion and Publications

Professor Starkel always preferred to maintain personal diary to note field observations and relevant data that helped him in writing his research findings. His observation-oriented research paid rich dividends in his explorative research work. He published more than 750 research works undertaken by him

including 30 books and monographs many of which were authored by him and some edited. He also mentored several successful researchers. Prominent among them are Professor P. Prokop and (Late) Professor Wojciech Froehlich who carried forward his experiment-based research and were collaborators in several well-known research programmes undertaken by him.

Awards and Distinctions

The list of honours and awards he was conferred with, speaks volumes about his scholarship and international recognitions he received during his long academic years. The most notable of the awards bestowed on him include the D. Linton Award by British Geomorphological Research Group (1985), Loczy Medal by Hungarian Geographical Society (1995), Gold Founders Medal of Royal Geographical Society (2004) and Medal of Scottish Geographical Society (2005). As most of his research activities were connected with INQUA, he chaired the Euro-Siberian sub-commission (1973-1981) that was part of the Holocene Commission. He had been a Polish delegate to the Advisory Board on 'Environment and Sustainable Development' of the 5th European Research Framework Programme (1992-2002).

Indo-Polish Research Collaborations

Prof. Starkel loved India, especially the Himalayas where he started his geomorphic investigations. He used to say that India was his second home. This is no exaggeration as he visited India more than 20 times since his first visit under PAS-CSIR exchange programme to attend International Geographical Congress, New Delhi in 1968. The *Journal of Indian Geomorphology*, vol 5, 2017 carried a brilliant account written by Prof. Starkel

himself enumerating his association with India, Indian geographers and the intensity of his research on Indian geomorphology. He initiated collaborative research programmes in India when he visited North Bengal University (NBU) to investigate the present-day processes in Darjeeling Himalayas. Since 1984, a long-term collaborative research between the Department of Geography, NBU and the Department of Geomorphology and Hydrology, Krakow under INSA-PAS exchange programme was undertaken by him to investigate fluvial process in the Darjeeling Himalayas. Many symposia and conferences were organized and a report was published in a Monograph entitled '*Rains, Landslides and Floods in the Darjeeling Himalayas*' published by Indian National Science academy (INSA), New Delhi (eds: L. Starkel and S. Basu, 2000),

The Indo-Polish Research Collaboration added a new chapter when Professor Starkel with two of his collaborators visited North Eastern Hill University (NEHU) Shillong in December 1996 to explore the possibility for extending investigations on geo-hydrological processes in Meghalaya, a well-known area of extreme rainfall. An Inter-Institutional Research Collaboration was finally signed in 1998 which later transformed into an Inter-Governmental Joint Research Programme (between the Ministry of Science and Technology, New Delhi, DST and Ministry of Education Warsawa, KBN) to investigate the Runoff and Soil Loss in Extreme Humid Conditions of Cherrapunji. The investigation continued for more than 15 years under his leadership and guidance. Several Symposia and Conferences were organized under the aegis of the collaborative research and many research papers and reports were prepared and published. On initiation of Prof. Starkel, the Department of Geography, NEHU, Shillong

conducted the Indo-Polish Joint Seminar in November 2006 where Indian and Polish geomorphologists interacted on issues of environmental degradation culminating in the publication of a book entitled *Environmental Changes and Geomorphic Hazards*.

The third phase of Indo-Polish Research Collaboration began in 2006 when Prof. Starkel and his team visited Itanagar, Arunachal Pradesh to work in the margin of Eastern Himalayan loop. However, Prof. Joshi, the Indian collaborator shifted to Nainital (Uttarakhand) but continued with the collaboration from Nainital.

Professor Starkel was a scholar with original ideas, a generous supervisor and talented geomorphologist. He will be remembered for his scholarly contributions to Indian Geography; especially fluvial geomorphology. His scholarship was wide-ranging. We fondly remember the experiences gained during his numerous visits to India, the lectures he delivered, field works he organised and seminars he conducted under the Indo-Polish Joint Research Programme since 1996. His methods of field observations were unique and impeccable. His death was a huge loss to geomorphologists and geographers in India and the world. Prof. Leszek Starkel will be missed for his insightful comments, radical visions, and his sense of humour which distinguished him as a rare intellectual. He will continue to inspire many generations of geographers and geomorphologists for years to come.

(Based on inputs from Professor Zofia Raczowska and Professor Prokop Pawel, Department of Geomorphology and Hydrology, PAS, Krakow)

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