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DR. MARIAN KUC (1932–2011): STUDENT AND COLLEAGUE

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Sometime in the early nineteen-fifties, a red-haired student attended my geology lectures at the Jagiellonian University in Cracow. He was an aspiring young botanist, already well experienced in the systematic study of mosses, his scientific hobby.

I recall that he did very well on the geology exam. And he piqued my interest when he showed me a well-preserved piece of Late Carboniferous silicified wood and told me the name – *Araucarioxylon schroellianus*! After that I learned that he was born in Chrzanów, a provincial town in eastern Silesia not far from Cracow, where he had been well tutored in high school by a talented mentor, Professor Mazaraki, under whose guidance he had become familiar with the geological problems of the Silesian Coal Basin and its fossil floras.

A couple of years passed. I became involved in scientific research on Spitsbergen (Svalbard Archipelago), initially as a member of the Polish reconnaissance team (1956), then as a participant in several scientific expeditions of the Third International Geophysical Year (1957–1958) and its continuation, International Geophysical Cooperation (1959–1960). My task was to conduct geological observations and detailed geological mapping of the Hornsund fjord area, south Spitsbergen.

In 1957, in the course of constructing the Arctic Scientific Station of the Polish Academy of Sciences at Isbjørnhamna, Hornsund, I became well acquainted with several research projects planned during the expeditions, and made good friends with many of my fellow expedition members, and with Assistant Professor Andrzej Środoń, a botanist, in particular. Andrzej, a renowned authority on the present and past Quaternary floras of Poland, was employed at the Institute of Botany of the Polish Academy of Sciences, chaired by our outstanding botanist/palaeobotanist, Professor Władysław Szafer.

Środoń's main scientific interest during the expedition was in the vascular plants of coastal tundra (Środoń 1958a, b, 1960, 1968). As a palynologist himself, he also collected samples from sections of subfossil peat bogs in order to establish the succession of Holocene vegetation in south Spitsbergen (Blake *et al*. 1965). His recognition of long-distance transport of pollen by stratospheric winds from mainland Norway to Spitsbergen was one of his main scientific achievements (Środoń 1960). In this task I helped him with collecting vegetation samples from initial tundra which grew on nunataks far from the coast.

Fascinated by the coastal tundra at Hornsund, where moss was one of the main elements, Andrzej wished to extend his botanical investigations with a monographic study of mosses. This was an important new field of research he opened for Marian Kuc, his younger colleague at the Institute of Botany. Knowing from his own experience how difficult this task might be in glaciated polar country, he asked me to take care of Marian, who unlike me had no mountaineering experience.

Marian Kuc joined the Polish expedition to Hornsund in 1958. Soon he became known as one of its most active members, expanding his work on mosses from coastal mossbogs to distant nunataks among the glaciers. In this research he was working mostly alone. It scared me to learn that he was hiking long solitary hours over crevassed glaciers in order to reach a promising nunatak or

Fig. 1. Krzysztof Birkenmajer (at left) and Marian Kuc (at right) carrying a Nansen sledge at Hyrnebreen, Hornsund (Spitsbergen). Photo M. A. Zawada, 1958

a mountain range far from the coast. Fortunately, nothing untoward happened. Marian climbed many peaks (Schramm 1968) and became a proficient polar explorer, expanding his scientific interests and collections. His work included systematic descriptions of mosses in coastal mossbogs, plant food of the Northern Ptarmigan, expansion of land vegetation over areas recently freed of glacier cover, and the like (Kuc 1961, 1963a–c, 1964a–c, 1968a–i).

During the 1958 expedition I was finishing a study of raised marine features at Hornsund. One of its products was a 1:10,000 scale geomorphological map of the northern coast of this fjord between Isbjørnhamna in the east and Revdalen in the west (Birkenmajer 1958, 1959, 1960, 1968). This sparked Marian's interest because such a map could be a good basis for a phytogeographical coastal study of an Arctic fjord. So he started mapping coastal vegetation, the first such work ever done in Svalbard, using my manuscript map. His geobotanical map was planned to be published in a botanical journal, with my final geomorphological map (Birkenmajer 1960) as the base. Unfortunately, publication of his geobotanical map was much delayed (Kuc 1998). When Marian moved to Canada in 1966, his interests immediately switched to the Canadian Arctic Archipelago. There he pioneered the study of mosses and vascular plant succession in recent and subfossil peat bogs on islands far north of the Arctic Circle (e.g., Kuc 1969b–d).

Marian's botanical work in Svalbard was well received worldwide (e.g., Kuc 1966, 1969a, 1973). Over the years he extended his bryological studies to mountain ranges of North America (Rockies), South America (Andes) and West Antarctica (Palmer Archipelago), occasionally also to French Guyana, French Polynesia and elsewhere. The list of his scientific publications exceeds 110 items.

After 1994, Dr. Kuc renewed close contacts with Polish polar scientists. He became a frequent participant in the Polish Polar Symposia, during

which he presented results of his scientific work in Svalbard during the Third International Geophysical Year (Kuc 1994a, b, 1995, 1996a, b, 1998, 2005), and a comparison of mosses of Svalbard with those of the Canadian Arctic (Kuc 1997).

Dr. Marian Kuc's death in 2011 deprived us of a world-class bryologist, a pioneer of studies of High Arctic mosses and mossbogs, and in particular those of Spitsbergen (Svalbard) and the Canadian Arctic Archipelago (Nunavut). That work and our memories remain.

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