

IN MEMORIAM

STEFAN ZBIGNIEW RÓŻYCKI

(1906—1988)

AN EMINENT POLISH POLAR GEOLOGIST



Photo by Z. Myszkowska

Polish Polar sciences suffered a great loss: Professor Stefan Zbigniew Różycki, an eminent Polish Polar geologist, Honorary Fellow of the Polish Committee on Polar Research, passed away after a long illness on September 16, 1988. Born on January 8, 1906 at Konstantinovka in the Donetz Basin, Ukraine, he was son of a Volhynian branch of the Polish Różycki family. His mother, née Rogozińska, was cousin of a well known Polish traveller Stefan Szolc-Rogoziński. The stories told at home of his voyages to Africa, had a profound impact on young Stefan Zbigniew's personality.

When Poland regained her independence after the World War I, S. Z. Różycki continued his secondary-school education first in Warsaw at the famous Stefan Batory Gymnasium, then at Częstochowa in the Henryk Sienkiewicz Gymnasium, where he passed his final examinations in 1925. A freshman at the Warsaw University, he chose geology and geography under supervision of famous Polish professors: geologist Jan Lewiński and palaeontologist Roman Kozłowski. His very good scientific progress acknowledged, he soon became an assistant to Professor Lewiński at the Department of Geology, Warsaw University, where he received his Ph. D. in geology in 1931, based on a study of the Pleistocene Polibórz Interglacial deposits.

Quaternary geology, and Mesozoic — particularly Jurassic — stratigraphy and faunas, became the main themes of S. Z. Różycki's research in Polar countries. As early as 1933, he got acquainted with a group of Polar enthusiasts from the Mountaineering Club of the Polish Tatra Association, particularly with Stefan Bernadzikiewicz and Stanisław Siedlecki. The latter just came back from Björnöya (Bear Island), Svalbard, where he wintered as a member of the Polish IInd Polar Year Expedition, 1932–1933. With Bernadzikiewicz, the future leader of several Polish expeditions to Spitsbergen, and Siedlecki, S. Z. Różycki worked out programme of a scientific expedition to Torell Land, by then almost unknown part of Spitsbergen, paying special attention to topographic and geologic surveys. The Polish 1934 Spitsbergen Expedition proved to be a great scientific success. S. Z. Różycki's geological studies of NW Torell Land, between Van Keulenfjorden and Amundsenisen-Polakkfjellet (central Torell Land), summarised in geological map 1:50,000 scale which covered about 700 square kms, accompanied by geological cross-sections (1:25,000 scale) and descriptive text published in 1959 in *Studia Geologica Polonica* (vol. 2) under the title "Geology of the North-western part of Torell Land, Vestspitsbergen", became a classic piece of study in polar geology of Spitsbergen and the Arctic as well. Of particular scientific interest, which had not faded out with time, are his excellent drawings and cross-sections which show complex fold structures with large-scale thrust-sheets in the Alpine fold belt of West Spitsbergen, not known before Różycki's study. Descriptions of field sections and age determinations of Mesozoic sequence of NW Torell Land presented by Różycki in his monograph, and particularly of the Jurassic — early Cretaceous sequence with boreal-

type marine faunas, have become a major source of information in this respect, and are still valued very high.

Quaternary geology and periglacial studies became another field of Professor Różycki's scientific interest strongly enhanced by the 1934 Spitsbergen Expedition. His field observations have resulted in several papers, with the most important one entitled "Zones du modelé et phénomènes périglaciaires de la Terre de Torell, Spitsbergen" published in *Biuletyn Peryglacjalny* (no. 5) in 1957. This paper presents regional differentiation and zonation of periglacial phenomena in Torell Land, being certainly a pioneer study in this respect. It should also be mentioned that Professor Różycki wrote numerous scientific-popular articles related to the Arctic, and a book "Amidst ice and rocks" (in Polish, published in 1959) with vivid descriptions of his experiences in Spitsbergen. These publications have greatly stimulated interest in Polar exploration in our country, both among laymen and scientists.

The World War 2nd and demolition of Warsaw by Nazi troops following the Warsaw Upsurge of 1944, have caused irreparable damage to Różycki's fossil collections from Spitsbergen, housed in the Museum of the Geological Survey of Poland — his working place. S. Z. Różycki, his *veniam legendi* completed in 1945 (based on a monograph of the Bathonian, Callovian and Oxfordian stratigraphy and faunas of the Cracow — Wieluń Upland, SW Poland), now moved back to the Warsaw University, where he soon became professor at the Department of Geography, then professor and director of the Department of Quaternary Geology of this university. At the same time, he started to organize a Quaternary Geology Laboratory at the Institute of Geological Sciences, Polish Academy of Sciences. Scientific potential of these two institutions combined, Professor Różycki was able to extend his and his disciples' Quaternary research over most of the Polish Lowlands, and to Spitsbergen as well, his "School of Quaternary Geology" becoming world-famous.

Along with teaching and developing research projects in Quaternary geology at the Warsaw University, and the Polish Academy of Sciences, Professor Różycki continued his interests in Polar sciences. As the Chairman of the Commission on Scientific Expeditions of the Polish IIIrd International Geophysical Year Committee, he took active part in preparations of the Polish expeditions to Spitsbergen from 1956 to 1960, led by his colleague, likewise a geologist, Stanisław Siedlecki. Within the framework of these expeditions, Krzysztof Birkenmajer continued Różycki's geological studies in Torell Land and Wedel Jarlsberg Land.

Professor Różycki was able to return to Spitsbergen in 1958 when he led a Quaternary geological expedition to Van Keulenfjorden. There, together with his disciples, Zofia Michalska and Andrzej Marcinkiewicz, and helped by a topographic team under Cezary Lipert, he studied changes in glacier extent and periglacial morphology which had occurred over the past 24 years.

The 1958 Spitsbergen Expedition concluded, Professor Różycki returned back home only to find himself busy with preparations to the first Polish Antarctic Expedition led by W. Krzemiński. After a long journey on board the Soviet ship *M/S M. Kalinin*, the expedition arrived at the Soviet Station *Mirnyy* in East Antarctica, from where it flew to Bunge Hills. There, on January 21, 1959, the Polish flag was hoisted at the site of the previous Soviet Station *Oasis* handed over to Poland on an agreement between the Polish and the Soviet Academies of Sciences. The Polish station got the name of Antoni B. Dobrowolski, member of the famous Belgian de Gerlache Expedition in *Belgica* to West Antarctica, 1897—1899.

Apart from official duties, as representative of the Presidium of the Polish Academy of Sciences, Professor Różycki was able to carry out his own scientific work at Bunge Hills. The resultant studies of raised marine terraces — a record of late Quaternary sea-level changes and land uplift, and extent of ice-sheet in Bunge Oasis, and in particular the paper entitled “Change-ments pléistocènes de l’extension de l’inlandis en Antartide Orientale d’après l’étude des anciennes plages élevées de l’Oasis Bunge, Queen’s Mary Land” published in *Biuletyn Peryglacjalny* (no. 10) in 1961, are among the first modern publications related to these studies in Antarctica.

It is beyond the scope of the present obituary to give a full account of Professor Różycki’s scientific achievements in geology. His wide interests in many aspects of Earth sciences brought him in 1970 to Sahara where, as a member of international scientific excursion organized by the Algerian Geological Survey, he recognized traces of an Ordovician glaciation comparable to the present-day Antarctic ice-sheet (Różycki 1970). His experience from Spitsbergen and Antarctica bore good fruits!

His bi-polar scientific achievements widely acclaimed both in Poland and abroad, Professor Różycki remained an authority for younger generation of Polar scientists and explorers. Despite his deteriorating health, he always showed keen interest in new developments in Polar sciences, particularly in fast-developing Polish Arctic and Antarctic programmes. A full member of the Polish Academy of Sciences, decorated for his scientific activities during the IIIrd International Geophysical Year with the Order Polonia Restituta First Class in 1962, he was also nominated Honorary Fellow of the Committee on Polar Research of the Polish Academy of Sciences, and awarded the Copernicus Medal — the highest scientific award of the Academy, in 1982, on the occasion of the 50th Anniversary of the Polish Polar Research.

May his illustrious achievements in geology of the Arctic and the Antarctic be always an example of good scientific work under hard conditions, his enthusiasm and devotion to Polar exploration — an example to be shared by younger generation.

Polar publications of Professor S. Z. Różycki

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1936. Ziemia Torella. Teren działalności polskiej wyprawy polarnej (Torell Land — area of Polish Polar exploration — in Polish). — *Taternik*, 29: 173—181.
1936. Arktyka, z. 2 (Arctic — in Polish). *In: Wielka Geografia Powszechna* (z. 78): 49—96. Trzaska, Ewert and Michalski, Warszawa.
1937. Arktyka, z. 3 (Arctic — in Polish). *In: Wielka Geografia Powszechna* (z. 100): 97—144. Trzaska, Ewert and Michalski, Warszawa.
1938. Arktyka, z. 4 and 5 (Arctic — in Polish). *In: Wielka Geografia Powszechna* (z. 101, 102): 145—209. Trzaska, Ewert and Michalski, Warszawa.
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1957. Strefowość rzeźby i zjawiska peryglacjalne na Ziemi Torella, Spitsbergen (Res.: Zones du modelé et phénomènes périglaciaires de la Terre de Torell, Spitsbergen). — *Biul. Peryglac.*, 5: 51—87, 187—224, 315—339.
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1960. O vremeni obrazovanija Oazisa Bunger Hills. — *Biull. Sov. Antarkt. Eksped.*, 20: 10—14.
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Prof. S. Z. Różycki on Spitsbergen in 1934
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Prof. S. Z. Różycki on Spitsbergen in 1958
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