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## “Polar Action” of Antoni Bolesław Dobrowolski in the interwar period

**ABSTRACT:** A. B. Dobrowolski, a member of the Belgian expedition in *Belgica* to West Antarctica (1897–1899), after his return home became a strong supporter of Polish scientific activity in the Polar countries. His patronage – called by him the “Polar Action”, was especially well marked during organization of three Polish expeditions to the Svalbard archipelago: to Bear Island during the 2nd Polar Year, 1932–33, and to Spitsbergen in 1934 and 1938. Apart from his scientific achievements in Antarctica, Dobrowolski was also widely known as an author of popular-scientific books on history of discovery and exploration in the Arctic and the Antarctic.

**Key words:** A. B. Dobrowolski, Polish Polar activity.

### Introduction

Apart from scientific studies and pedagogical work, one of the passions of Antoni Bolesław Dobrowolski when he had returned home from the *Belgica* Expedition to West Antarctica (1897–1899), was the organization of scientific research in Poland. This was first made possible when, in recognition of his great scientific achievement – the monography “Natural history of ice”, he was nominated deputy-director (in 1924), then director, of the State Meteorological Survey.

Considering himself responsible in Poland not only for the meteorology, but also for the geophysics at large, he devoted much time to strengthening the State Meteorological Survey. He had founded the Marine Observatory in Gdynia, the Aerological Observatory at Legionowo near Warsaw, and the Magnetic Observatory at Świder near Warsaw. He had also initiated new meteorological periodicals and integrated specialists in the Society of Geophysicists in Warsaw he had founded in 1930.

As an authority in Polar research, Dobrowolski was able to actively promote Polar research in his native country, and to integrate the Polish Polar scientists

and explorers in the “Polar Circle Club”. This form of activity was called by him the “Polar Action” (see Dobrowolski 1958, Popiołek 1998).

## 2nd Polar Year (1932–1933)

The 2nd Polar Year (1932–1933) was the first occasion for Poland as an independent country to carry out scientific research in Polar regions. At a meeting of the International Meteorological Organization held in Copenhagen, in September 1929, Poland was represented by Stefan Hłasek, A. B. Dobrowolski’s successor as the director of the State Meteorological Survey in Warsaw. At this meeting, it was decided that the period of international cooperation during the 2nd Polar Year would be from August 1, 1932, to September 1, 1933. An International Committee including representatives of 14 countries was formed, headed by Dr La Cour, the Director of the Royal Meteorological Institute in Denmark.

The Polish National Commission for the 2nd Polar Year was soon formed by the decree of the Ministry of Agriculture under which the State Meteorological Survey was operating. It included seven members: Jean Lugeon (director of State Meteorological Survey, head of the Commission), Czesław Białobrzeski (Professor of physics, University of Warsaw), Antoni Bolesław Dobrowolski (past-director of the State Meteorological Survey), Janusz Groszkowski (Professor of physics, Warsaw Polytechnic High School), Stefan Hłasek (past-director of the State Meteorological Survey), Stanisław Kalinowski (Professor of physics, Warsaw Polytechnic High School, director of Magnetic Observatory at Świder near Warsaw), and Władysław Smosarski (Professor of meteorology, University of Poznań).

The scientific programme for the Polish participation in the 2nd Polar Year included studies on aurora borealis, geomagnetism and terrestrial electricity, solar radiation, meteorological and aerological observations, etc. The Polar programme, as outlined by J. Lugeon, included: (1) a project maximum – an expedition in two amphibious tanks to the North Pole; (2) a project of stationary observations at an Arctic site recommended by the International Commission; (3) a project minimum, postulating participation of Polish scientists with their own research programme to be carried out in conjunction with other countries’ national programmes (*e.g.* in Norway) – see Lugeon (1930, 1931, 1933a).

In his preliminary report, Dr J. Lugeon stated: “In May, 1931, after an agreement with Dr La Cour, I have concluded that the most rational form of cooperation would be to form during the Polar Year a Polish station on Bear Island (Björnöya). The research programme of this station should include observation and recording of phenomena concerning terrestrial magnetism, general meteorology, radioelectricity with particular emphasis on atmospheric noise, as well as photodocumentation of aurora borealis” (Lugeon 1931).

This project was accepted by the International Commission of the 2nd Polar Year, and the International Meteorological Committee. Dr Hesselberg, director of the Norwegian Meteorological Survey in Oslo, gave permission to use facilities of the Norwegian meteorological station on Bear Island by the Polish expedition. The International Commission had supplied two sets of magnetographs, in addition to the instruments provided by the Polish State Meteorological Survey. A. B. Dobrowolski himself played an important role in completing further scientific equipment for the expedition.

From a list of more than two hundred candidates, Lugeon had selected engineer Czesław Centkiewicz (a graduate of High Electrotechnical School in Liège), Władysław Łysakowski (a graduate in geophysics from the Jan Kazimierz University in Lwów, currently employed as a meteorologist at Lwów airport<sup>1</sup>), and Stanisław Siedlecki (a student of physics at the Jagellonian University in Cracow). Before the expedition, they underwent special training in the Marine Observatory at Gdynia, in Aerological Observatory at Legionowo (meteorology), and in the Marine Station at Hel (geomagnetism). Łysakowski and Centkiewicz underwent, moreover, a special training in magnetic observations at the Royal Meteorological Institute in Denmark.

The expedition started on July 15, 1932. The three-man wintering team led by C. Centkiewicz, was accompanied on Bear Island during the Arctic Summer by J. Gurtzman and J. Lugeon, the latter acting as the chief organizer of the expedition.

The results of the expedition to Bear Island were published by the Polish State Meteorological Survey in four volumes: I – Meteorology; II – Terrestrial magnetism; III – Atmospherics; IV – Aurora borealis. Two more volumes were planned (V – Clouds; VI – Transactions) but never appeared in print (Lugeon 1933b, c, Lugeon *et al.* 1936).

The expedition to Bear Island was also a personal success for A. B. Dobrowolski whose role as an experienced Polar scientist in providing practical help and good advice, was greatly acknowledged by its organizers.

## The Polish 1934 Spitsbergen Expedition

Organization of the first Polish Spitsbergen Expedition to NW Torell Land in 1934, was in hands of mountaineers: engineer Stefan Bernadzikiewicz (expedition's leader) and Stanisław Siedlecki. At a meeting of the Organization Committee held at the State Meteorological Survey in Warsaw on February 22, 1934, and headed by A. B. Dobrowolski, the expedition's programme was es-

<sup>1</sup> Presently Lvov (Ukrainian Republic).

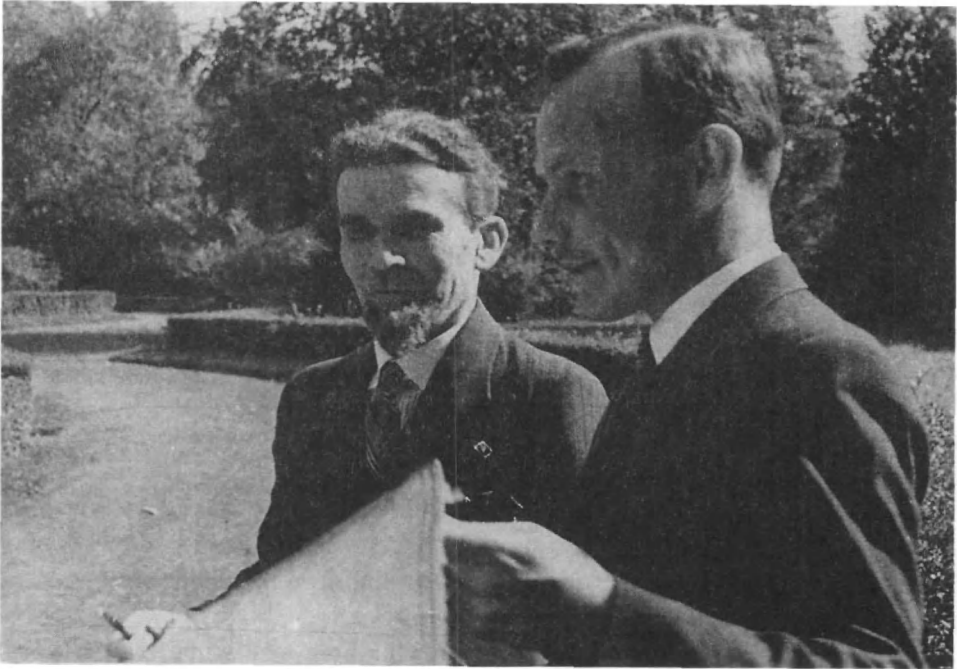


Fig. 1. A. B. Dobrowolski (left) and S. Bernadzikiewicz during preparations for the Polish 1934 Spitsbergen Expedition. *Photo by H. Mogilnicki. Photo-collection of the Museum of the Earth, Warsaw.*

tablished: it included geodesy and topography, geology, zoology and botany, and shooting of a scientific documentary film.

During the preparation stage, and after the expedition, Dobrowolski (Fig. 1) presided over the expedition's committee, whose members also included: Jean Lugeon (director of State Meteorological Survey, vice-president), Stanisław Siedlecki (secretary), Stefan Bernadzikiewicz (expedition's leader and treasurer), Stanisław Osiecki (president of the Polish Tatra Society), Jan Lewiński (Professor and director of the Department of Geology and Palaeontology, Warsaw University) and Tadeusz Zieleniewski (colonel, director of the Military Geographic Institute).

The expedition's team included: S. Bernadzikiewicz (leader), Witold Biernowski (film and radio communications), Henryk Mogilnicki (photographic documentation and radio communications), S. Siedlecki (meteorological observations, collecting of zoological specimens), Sylwester Zagajski (major at the Military Geographic Institute, triangulation survey); Antoni Rogala Zawadzki (Captain at the Military Geographic Institute, photogrammetry), Stefan Zbigniew Różycki (geology and botanical collections).

The expedition to Torell Land lasted from 30 May to 16 September, 1934, carrying triangulation and photogrammetric surveys, geological, glaciological and botanical investigations. Their principal results were: preparation of a topo-

graphic map, 1:50,000 of NW part of Torell Land by Zagrajski and Zawadzki (1935, 1936), and geological map in the same scale by Różycki (1936, 1959; see also Dobrowolski 1935).

## The Polish 1938 Spitsbergen Expedition

Thanks to Dobrowolski’s initiative, the “Polar Circle Club”, affiliated to the Society of Geophysicists in Warsaw, was founded in 1938. At the meeting of its council on April 5 the same year, Dobrowolski had proposed organization of another expedition to Spitsbergen, and Dr Ludwik Sawicki was asked to prepare a memorandum explaining the need for such a scientific enterprise. The aims of the expedition were purely scientific: glaciology and Quaternary geology.

The area of Kaffiöyra in Oscar II Land, NW Spitsbergen, was selected. There, glaciological and geomorphological investigations were carried out from 5 April to 6 September, 1958. The expedition staff included: Stefan Bernadzikiewicz (leader), Bronisław Halicki, Ludwik Sawicki and Mieczysław Klimaszewski (Halicki 1938; Sawicki 1939, 1959; Klimaszewski 1960; Wójcik 1982).

## Final remarks

The role of A. B. Dobrowolski in promoting and supporting the Polish Polar expeditions to the Arctic in the interwar period (1924–1938) was outstanding. By his fellow Polish Polar scientists and explorers, he was regarded a “father figure”. After the World War II, it was Dobrowolski who, at a meeting devoted to problems of the Quaternary held in Cracow in 1946, stressed the need for further Polish scientific activity in the Polar countries. In his lecture entitled “Polish scientific expeditions to the Arctic”, he also postulated establishing of a “Polish Society of Quaternary Scientists”, and reactivating of the pre-war “Polar Circle Club” (Dobrowolski 1946).

A. B. Dobrowolski did not live long enough to see his ideas materialize when the Polish Academy of Sciences decided in 1956 to organize a series of scientific expeditions, and to build a Polish Scientific Station at Hornsund, south Spitsbergen, in connection with the IIIrd International Geophysical Year (1957–1958).

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