

HENRYK ARCTOWSKI
(15 July 1871 – 21 February, 1958)



H. Arctowski in laboratory on *Belgica*
Photo-collection of Baron Gaston de Gerlache de Gomery.

Henryk Arctowski, a prominent Polish polar scientist, geophysicist and geologist, was born in Warsaw in the then Russian-occupied part of Poland. After completion of his secondary education, he took up from 1888 to 1893 studies in geology and chemistry at the universities of Liège and Paris. Subsequently, he worked at Professor W. Spring's Chemical Institute at the University of Liège, specializing in mineralogy and publishing 20 scientific papers in this field.

Having established in 1895 a cooperation with Adrien de Gerlache de Gomery, the commander of the future Belgian Antarctic Expedition on *Belgica* (1897–

1899), Dr Arctowski decided to join its scientific staff. After carefully preparing himself for this task by undertaking special studies in glaciology in Switzerland, oceanography in England and meteorology in Belgium, he joined this expedition in the research capacity of geology, oceanography and meteorology. Thanks to great devotion of the research staff of the *Belgica* expedition, of which Arctowski was in fact the scientific leader and one of its most active members, the expedition brought from Antarctica invaluable scientific collections and observations.

On his return from Antarctica, Arctowski devoted his entire time to elaborating and editing the expedition's scientific results in geology, geomorphology, oceanography, glaciology and meteorology, which were subsequently published in ten volumes by the Royal Belgian Academy of Sciences.

Apart from his work on the Antarctic research materials, Arctowski was very active in organization of science, taking part in numerous international congresses, presenting his own projects of international cooperation in polar sciences, notably in the Antarctic. It is worth to mention that as early as 1899 he had suggested the use of mechanical traction ("auto-tractors") for polar exploration, in 1903 he advanced a detailed plan for a network of meteorological stations around Antarctica, and in 1907 elaborated a project of the second Belgian expedition to the Antarctic continent.

After marrying in 1909 Arian Jane Addy, an American actress and singer, Arctowski took up his new residence in the United States where he became chief of the Science Division at the New York Public Library, which he directed from 1911 to 1919.

Simultaneously, he continued his studies on weather and climate variations, their interrelation with such factors as volcanic dust, sun spots, magnetic storms, solar constant variations, and their influence on crop yields. In his numerous publications, he introduced and developed his own pioneer research methods. In 1910, he visited Spitsbergen as a member of scientific excursion of the International Geological Congress.

During World War I, Arctowski was engaged in political activities in favour of Poland's independence. As a member of the American House Commission for Polish Affairs, acting within the framework of the so-called "Inquiry", he prepared a magnificent "Report on Poland, compiled for the use of the American Delegation to the Peace Conference", embracing 2462 typewritten pages in quarto, 127 maps, graphs and tables. From 1918 to 1920, Arctowski worked with the Commission at the Peace Conference in Versailles, where he had established close cooperation with the Polish delegation.

In 1920, Arctowski returned to Poland. After refusing to accept a post of Minister of Education, offered him by the Prime Minister Ignacy Paderewski, he devoted himself entirely to academic career. He became professor and director at the Department of Geophysics and Meteorology of the King Jan Kazimierz University in Lwów. There, he had organized and conducted research on:

geothermal field gradient in the Carpathian oil-boreholes; chemical properties of crude oil; magnetic field variations; weather and climate changes and their interrelation with solar activity, dynamics of the atmosphere, transport of atmospheric masses, global diurnal and annual changes in its temperature, pressure and precipitation; moreover, on aerological research for the use in oil industry. This has resulted in more than 130 research papers, many of them presented at international scientific meetings.

While in Poland, Arctowski took an active part in promoting Polish scientific research in the polar countries. He strongly supported Poland's participation in the 2nd International Polar Year (1932–1933). He gave his support to the organization of the first Polish West Greenland Expedition (1937) led by his disciple Dr Aleksander Kosiba. He also called for establishing of a Polish research station in West Antarctica.

Since 1931, Arctowski was vice-president of the International Commission of Climate Variations of the International Geographic Union. On its behalf, he prepared an extensive bibliography on climate variations, the first part of which, containing 4153 entries, was published in 1938 in mimeographed form; its second part was ready for print at the outbreak of World War II. In his publications and in scientific discussions regarding climate variations, Arctowski constantly stressed the necessity of introducing uniform globally applicable statistical methods. He was among the first scientists to draw attention, in 1921, to the relations between weather and climate variations, and solar activity variations.

In August, 1939, Arctowski left Poland for Washington D.C., to participate in a congress of the International Union of Geodesy and Geophysics. The outbreak of World War II made his and his wife's return to Poland impossible, and cut him off for the rest of his life from his academic workshop at home. On his departure from Lwów in 1939, he had left behind him a considerable number of unfinished scientific papers. Learning in America about the German invasion of his native country, Arctowski immediately cabled the Polish Government, contributing his savings held in securities and cash in Poland to aid national defence.

Despite his advanced age of 68 years, Arctowski did not want to remain idle, but joined, in 1939, the Smithsonian Institution in Washington, D.C., where he remained member of its scientific staff until 1950 when he reached the age of 80. In his work at the Smithsonian, he continued his studies on correlation between variations of the solar constant and size of sun spots, and their impact on Earth's atmosphere. He maintained close relations with American polar explorers and, with keen interest, followed their achievements in Antarctica.

After World War II Arctowski, who found it impossible to return home to Poland under communist rule, remained on exile status in the United States. He deeply deplored his isolation from Polish science and his former disciples who, after departure from Lwów (which was taken over by the Soviet Union) settled

at new university centres in Poland, particularly in Wrocław and Lublin. He maintained close relations with them by mail.

Arctowski's scientific achievements received much attention in academic circles all over the world. In recognition of his scholarly merits he had obtained numerous Polish and foreign decorations. Several geographic features in West Antarctica and Spitsbergen bear his name. The second Polish Antarctic Station – on King George Island in the South Shetland Islands, opened in 1977 by the Polish Academy of Sciences, was also named after him.

Professor Henryk Arctowski passed away in Washington, D.C., on 21st February 1958. His ashes, as well as the ashes of his American wife, rest at the Powązki Memorial Cemetery in Warsaw.

Jacek MACHOWSKI