

Coins

– Henryk Arctowski and Antoni B. Dobrowolski –



face value	10 zł
metal	925/1000 Ag
finish	proof
diameter	32.00 mm
weight	14.14 g
mintage (volume)	57,000 pcs

Obverse: On the right, an image of the Eagle established as the State Emblem of the Republic of Poland. Below the Eagle an inscription, 10 ZŁ. At the top, a semicircular inscription, RZECZPOSPOLITA POLSKA, and on the left, diagonally below the inscription, the notation of the year of issue, 2007. To the left from the Eagle, a stylised "Belgica" ship image, below, a stylised iceberg image and an ice-imitating zirconia. The Mint's mark, $\frac{m}{w}$, under the Eagle's left leg.

Reverse: Images of the busts of Henryk Arctowski and Antoni B. Dobrowolski. At the bottom, on the left, the image of the Antarctic continent. At the top, a stylised image of an iceberg. In the rim, an inscription, HENRYK ARCTOWSKI 1871-1958, a stylised image of Henryk Arctowski Polish Antarctic Station logo and an inscription, ANTONI B. DOBROWOLSKI 1872-1954.



face value	2 zł
metal	CuAl5Zn5Sn1 alloy
finish	standard
diameter	27.00 mm
weight	8.15 g
mintage (volume)	990,000 pcs

Obverse: An image of the Eagle established as the State Emblem of the Republic of Poland, at the sides of the Eagle the notation of the year of issue, 20-07, below an inscription, ZŁ 2 ZŁ, in the rim an inscription, RZECZPOSPOLITA POLSKA, preceded and followed by six pearls. The Mint's mark, $\frac{m}{w}$, under the Eagle's left leg.

Reverse: Images of the busts of Henryk Arctowski and Antoni B. Dobrowolski. At the top, a stylised image of the "Belgica" ship. In the rim: on the left an inscription, HENRYK ARCTOWSKI 1871-1958, on the right an inscription, ANTONI B. DOBROWOLSKI 1872-1954, and at the bottom, a stylised image of Henryk Arctowski Polish Antarctic Station logo.

On the edge: An inscription, NBP, eight times repeated, every second one inverted 180 degrees, separated by stars.



Coin designer: *Ewa Tyc-Karpińska*

Information on how to buy the coins on the following website:
www.nbp.pl

Coins struck by the Mint of Poland plc. in Warsaw.

Printed by NBP Printing Office

On 19 September 2007 The National Bank of Poland is putting into circulation coins representing Henryk Arctowski and Antoni B. Dobrowolski, with face values amounting to:

- 10 zł – struck in proof finish in silver,
- 2 zł – struck in standard finish in Nordic Gold alloy.

The purpose of issuing the coins is to remind about the activity of two Polish explorers, whose lives are inextricably tied to the pioneering exploration of the Antarctica.

Henryk Arctowski (1871-1958)

Henryk Arctowski was born on 15 July 1871 in Warsaw. His ancestors came from the German Arctzt family; they came to Poland in the 17th century from Württemberg. Young Arctowski first studied physics and mathematics in Liège, then he studied geology and chemistry at Sorbonne in Paris. He published many scientific works on geology. Proud of his Polish ancestry he polonised his surname from Arctzt to Arctowski. His Antarctic adventure began in 1895 when he established contacts with baron Adrien de Gerlache de Gomery – sergeant of the Belgian Royal Navy, who impelled the Brussels Geographic Association to finance the scientific expedition to the Antarctica. Apart from Henryk Arctowski, the international crew included another Polish explorer – Antoni Bolesław Dobrowolski. A former whaler "Patria", adjusted to conduct the polar voyage, was renamed into "Belgica" and as a discovery and research unit set sail from Antwerp in 1897, heading far southwards. Henryk Arctowski conducted research in the area of glaciology, oceanography, geology and meteorology and was a scientific director of the entire expedition. A young Norwegian - Roald Amundsen was a first officer – several years later he would reach the South Pole as the first person ever. On 15 February 1898 "Belgica" crossed the Antarctic Circle and reached 71°31'S, where it got trapped in the ice for 377 days. It was their first winter in the Antarctica, below 60° S. On the basis of scientific research Arctowski formulated the so-called Antarctandes hypothesis about the geological analogy between the South Andes and Scotia Arc islands and the Antarctic Peninsula mountain range. On the basis of annual meteorological observations of that region, collected for the first time in history, he found out that Antarctica was colder than previously thought. He also observed the analogies between optical atmospheric phenomena (e.g. aurora) on the southern and the northern hemisphere.

After his return to Belgium, he was in charge of the meteorological station of the Uccle observatory between 1903 and 1909.

In 1909, Arctowski and his wife moved to New York where he started working in the library as a head of the natural sciences section. He did not abandon his scientific work and owing to many publications on global climate changes he found his way to the milieu of eminent researchers dealing with this issue.

In 1919, during the Versailles peace conference where Polish independence was recognised, Arctowski acted as an expert

presenting "The Report on Poland" (containing 14 chapters, 2,500 pages altogether, numerous maps and charts).

In 1920, Ignacy Paderewski offered Arctowski a position of the Minister of Education in the government of the Republic of Poland. However, Arctowski chose a scientific career taking the chair of Geophysics and Meteorology at Lviv University, where he was honoured the title of the holder of an honorary doctorate.

In August 1939, Arctowski, as a chairman of the Commission on climate changes, participated in the International Union of Geodesy and Geophysics Congress in Washington. The outbreak of war forced him to remain abroad. In 1940, Henryk Arctowski was granted American citizenship and started working at the Smithsonian Institution in Washington. His achievements in the area of polar research cover over 400 published scientific works.

Arctowski died on 21 February 1958 in Washington. Two years later his ashes were brought to Poland and were buried at the Powązki Cemetery in Warsaw.

Antoni Bolesław Dobrowolski (1872-1954)

Antoni Bolesław Dobrowolski was born on 16 June 1872 in Dworzowice Kościelne, under Russian rule. Due to a very poor financial standing of his family, as early as at 12 years old he had to work in order to earn money for his education. Six months after having obtained a secondary school diploma he was arrested for conspiracy and sentenced to 3 years' imprisonment. At first he served the sentence in the tenth pavilion of the Citadel, then in the Pawiak prison and in St. Petersburg, finally, he was exiled to Tiflis (Tbilisi) in the Caucasus. After two years of exile he managed to escape. He made his way to Zurich where he attended natural studies, then he left for Belgium.

Owing to his good luck and doggedness he managed – as the second Pole – to become a member of the international "Belgica" ship crew, setting sail for the first scientific expedition to the Antarctica. During the long voyage Dobrowolski kept everyday, thorough observations of clouds, lasting many hours a day, describing their thickness, height, coherence and structure. He described the halo phenomenon around the Sun's disc, observed at *cirrus* clouds. He described a total of around 100 cloud positions, contributing to the considerable development of meteorological sciences. He included results of these observations in "Memoriał o chmurach" (Memorial about clouds). He also thoroughly defined the snowfall enriching the definitions with hundreds of specific drawings of snow crystals. The bulk of meteorological observations collected by Dobrowolski constituted a great contribution to the final result of "Belgica" expedition, for which, after returning to Belgium, Dobrowolski was honoured a two-year scholarship for working out the results of his research. He described his impressions concerning the thirteen-month wintering among the Antarctica ice aboard "Belgica" in the book entitled "Wyprawy polarne" (Polar expeditions), for which he was honoured the Warsaw Literary Prize in 1914.

Between 1905 and 1907 Dobrowolski was a member of the International Polar Bureau in Brussels. After the amnesty for political immigrants declared by Emperor Nicholas II of Russia, he returned to Poland and started working as a school teacher.

During the First World War he worked in Sweden, continuing his studies on snow flake and ice crystal structure as well as the dynamics of glacier movement. The effect of these studies was the book "Historia naturalna lodu" (The Natural History of Ice) published in 1923.

In 1924, he started working in the National Meteorological Institute and soon became its director. In 1929, he established the Association of Geophysicians and in 1934 - the Seismological Observatory.

During the Second World War he remained in Poland. Between 1945 and 1954 he worked at the pedagogy department of the University of Warsaw, in 1952, he became a member of the Polish Academy of Sciences. In the 1950s, the government of the People's Republic of Poland started limiting his scientific activity and suspended his postgraduate scholarship. Therefore, Dobrowolski's last works were published posthumously, prepared by his students.

Antoni Bolesław Dobrowolski died in Warsaw on 27 April 1954. He was buried at the Powązki Military Cemetery.

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