

PIONEER HUNGARIAN WOMEN IN SCIENCE AND EDUCATION

Edited by Réka M. Cristian and Anna Kérchy



AKADÉMIAI KIADÓ

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BERTA DEGENFELD-SCHOMBURG (1843–1928): THE ASTRONOMER BARONESS

Katalin Kéri



Baroness Berta Degenfeld-Schomburg

Source: degenfeldkastely.com

It used to be the order of the day for the history of natural sciences, like history in general, to gloss over female contributors. Yet the history of science as hallmarked by the canonical figures of Aristotle, Copernicus, Newton, Einstein and a handful of other male names, seems rather blinkered when it comes to describing the process that led, always gradually and often by fits and starts, to major scientific discoveries. The few who ultimately claimed a

major milestone were backed and continue to be backed by scientists both male and female, who made their own crucial contributions to the progress of science and momentous achievements through their observations, calculations, experiments and ideas. The field of astronomy was no exception.

As Margaret Alic writes, the cultivation of science takes intelligence, creativity, proper upbringing and dedication. These four prerequisites certainly apply to astronomy, particularly if augmented by endurance, vigilance, outstanding mathematical skills (obviously) and proficiency in the use of various devices and techniques. Although a survey of the career of women engaged in astronomy through history cannot pretend to account for the role of women across the board in the civilization of a given era, it can clearly supply important details for a better understanding of that role. Indeed, we know of quite a few women who have made astronomical observations over the ages, working alongside their fathers, husbands and brothers. They may not represent the majority of female society of their day, but scrutinizing their activities will offer useful insight into the age in terms of the educational customs, mores, the relations between parents and children and between man and wife, as well as provide a glimpse into the lifestyle of the middle and aristocratic classes and behind the scenes, of the stage where the progress of natural sciences unfolds.

Perusing the index in lexicons and histories of astronomy it is seldom that one encounters a female name here and there. However, if one delves into the subject, they will find ample evidence in written sources documenting women who looked upon the sky and not with the intent to muse and swoon over their lovers by starlight. Some of

them, far ahead of their female contemporaries and flouting the prejudices around them, embarked on astronomical research and theory. In this regard they left a mark by leaving to posterity various letters, diaries and articles in professional journals and by lending their names to craters of the Moon, to flowers, observatories and schools.

The education of girls in nineteenth-century Hungary, as elsewhere, gradually gained pace as part of the effort to build a bourgeois society centered on the middle-class. Yet few women were granted the chance to explore the secrets of the sky. At the turn of the century, amidst frenzied debates in Parliament, scientific societies and the press regarding the life mission and education of women, most Hungarians believed that women were not cut out for a career in science. As Júlia Jósika wrote in her book in 1885, “a woman, unless she works in literature or eyes the chair of a university department as an exception to the rule, is never expected to have conducted studies in the humanities *in abstractio*, let alone in astronomy, since these disciplines require more than a lifetime to produce enduring results.” Like Jósika, the majority of the public believed that women were destined by their biological specificity to occupations other than the pursuit of science. The “feeble body” of women had to be protected against various risks, whether it had to do with riding a bicycle or dabbling in astronomy. This general public opinion notwithstanding, with Hungary under the Dualism, harbored a handful of exceptions to the rule; these women did not bow to prejudice but strove to live a full life, in an effort to own up to their gift despite the hardships.

One of these women was Baroness Berta Klára Matild Ferdinanda Degenfeld-Schomburg, the wife of Baron Géza

Podmaniczky, a maverick of a woman in the Hungarian society of her age. Berta, the daughter of Count Degenfeld-Schomburg and Paulina Bek of Bököny, was born in Téglás on March 12, 1843. According to the obituary of Ilona Degenfeld, wife of Kálmán Tisza, the Degenfeld family had hailed from Switzerland and found their way to Hungary via Germany. "After the Revolution," the obituary continues, "the Degenfelds were considered among the finest families in Hungary known for their love of the country." On January 15, 1868, in Nyírákta, Berta married Count Géza Podmaniczky, born in 1839, vice-notary for Pest County and member of the Hungarian Upper House. The baroness held estates in Kartal, Pest County and in Puszta-Krakkó, Nógrád County so the newlyweds could afford a honeymoon around the world with a stopover in Japan.

The well-to-do family undertook to build an observatory in Kiskartal, where the baroness and her husband continued to explore the night sky. The design of the structure was based on the plans of Miklós Konkoly-Thege, the pioneer of astronomy in Hungary, who had built his own observatory in his estate in Ógyalla. The construction of the observatory in Kiskartal had been preceded by a major scientific discovery made by Berta Degenfeld-Schomburg on August 22, 1885, while she stayed at her estate in Nyírbakta. Scrutinizing the night sky in the company of the astronomer Radó Kövesligethy using a 9 cm telescope, she became one of the first in the world to independently detect S Andromedae (Messier catalog No. M31), the first known extragalactic supernova. Konkoly-Thege reported the discovery in a newspaper article and, although he did his best to win recognition for the baroness as the first to observe the supernova, he failed in these efforts. Inci-

dentially, astronomers had known precious little about the true nature of the Andromeda Nebula, known as the twin of the Milky Way, before the early twentieth century. No wonder that Berta Degenfeld-Schomburg had no idea that the supernova she observed might have anything to do with the spiral galaxies far beyond the boundaries of the Milky Way.

Following the discovery, Degenfeld-Schomburg decided to build an observatory to optimize technical conditions for observation at their own estate. The crown jewel in the arsenal was an 18 cm (7 inch) Merz-Cooke refractor, supplemented by various lens telescopes such as a 9 cm telescope designed for comets and a 5 cm Plössl, as well as a meridian circle and other instruments. The first director of the observatory was the young Radó Kövesligethy who, in his 1889 academic address, hailed the facility in Kiskartal as “an enchanting and fully equipped model” of privately owned observatories, providing a detailed description of the location and instrumentation of the building. Otherwise, Kövesligethy preferred to spend his time on spectral analysis and his book in German, *Grundzüge einer theoretischen Spektralanalyse*, was published in 1890 by the Kiskartal Observatory. Later on, the management duties were assumed by Antal Wonaszek, who focused on the discovery of planets and edited two publications for Kiskartal.

Another person making invaluable observations at the Kiskartal estate was the owner, Berta Degenfeld-Schomburg, who set her eyes on Jupiter, Mars, Uranus and a number of comets while working alongside her husband performing spectral analysis and studying binary star systems. “We are busy in Kiskartal scrutinizing planet surfac-

es,” wrote Kövesligethy in his observation log, which he kept until 1907. As the researcher Mrs. Domokos Vargha points out, the logs reveal that the baroness joined her husband and Kövesligethy at work on several occasions, for instance on June 21 and October 5, 1887, when they observed a meteor shower.

In 1899, Kövesligethy mentioned about 500 publications in mathematics and astronomy held by the observatory library, adding that the inventory continued to grow. Not much later, the library boasted nearly 40,000 books, many of them on astronomy and the history of science. The professional organization and cataloging of the collection was entrusted to Berta Degenfeld-Schomburg. In 1889, the couple purchased some of the collection of the observatory founded in 1813–1815, which had been destroyed during the siege of Buda Castle and whose successor on Gellért Hill had been terminated by the Austrian government in 1852. They also bought Ferenc Albert’s library and acquired two further collections, one from Lajos Podmaniczky in Aszód in 1889 and the other from Sándor Prónay in Tóalmás in 1891.

The observatory was visited frequently by Wonaszek’s disciples, by university students and professors, while the mansion itself served as an important venue for social gatherings. One time even the monarch Franz Joseph called on the house kept by Géza Podmaniczky and Berta Degenfeld-Schomburg. In his novel *A Kékszalag hőse* [The Hero of the Blue Ribbon], writer Gyula Krúdy modeled his protagonist on the athletic Podmaniczky, who was elected member of the Magyar Tudományos Akadémia [Hungarian Academy of Sciences] in recognition of his astronomical observations. Berta Degenfeld-Schomburg’s

sister Ilona was the wife of Kálmán Tisza, Hungary's Prime Minister from 1875 to 1890, a frequent guest at her beloved sister's estate. Moreover, as a close friend of writer Minka Czóbel, Berta got to read many of her works first-hand.

The memoirist Farkas Szent-Ivány, deeply impressed by the person of the baroness who was the aunt of the Anna Zichy he had married in 1918, lauded Degenfeld-Schomburg with the following words: "If ever a very old woman could be termed beautiful, *appetitlich*, cute, charming, gentile and, most of all, smarter and more benevolent than all, then this description certainly fit our beloved auntie Mrs. Géza Podmaniczky, née Berta Degenfeld. At eighty-some years of age, she remained in fully capacity of her mental faculties (of which she had never been short). Her eyes radiated sheer intelligence, goodness and love."

Géza Podmaniczky died on August 26, 1923 and Berta Degenfeld-Schomburg Berta followed him on March 27, 1928, in Kiskartal. The couple rests in the cemetery of Krakkópusztá. Podmaniczky bequeathed all the instruments on site to the Svábhegy-Hill Observatory during his life, in 1922. After the passing of the founder, the observatory in Kiskartal went defunct, even the building was demolished. In 1928, parts of the rich private library were acquired by the Lutheran Church of Budapest and the Svábhegy-Hill Observatory, while the Cooke refractor ended up in Cuba under a given agreement.

On September 4, 2009, the International Astronomical Union named a planetoid after Géza Podmaniczky, after his wife Berta Degenfeld-Schomburg and after the locality of their observatory, naming these planetoids as Podmaniczky 2005GD, Degenfeld 2005GA and Kiskartal

2005GH1 accordingly. All three celestial bodies had been discovered by Krisztián Sárneczky in 2005.

In the twentieth and twenty-first centuries, several female astronomers in Hungary followed in the footsteps of Berta Degenfeld-Schomburg with notable results of their own. One of them was the wife of László Detre, Júlia Balázs (1907–1990), who worked at the Miklós Konkoly-Thege Institute of Astronomy, under the aegis of the Hungarian Academy of Sciences Research Center for Astronomy and Geology, attaining international accolades for her investigation into the luminosity shifts in pulsating variable stars. Among the women pursuing successful astronomical research in Hungary today, mention must be made of Erzsébet Illés (stratosphere research), various staff members of the Miklós Konkoly-Thege Institute of Astronomy such as Antónia Johanna Jurcsik, Margit Papp, Katalin Oláh and Mária Kun, also Lídia Van Driel-Gesztelyi, Eötvös Loránd University faculty member currently working for the Mullard Space Science Laboratory of London University College, Emese Dajka and many others soon to be followed by high school girls, female university students and amateur astronomers—all of them to be watched in the coming years. They are poised on the brink of scientific achievements which will no doubt be etched in the hall of fame listing by name the finest observers of the starry skies.

Translated by Péter Balikó Lengyel

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Katalin Kéri (PhD, DSc) is Professor of Pedagogy at János Selye University and University of Sopron, head of the Doctoral School of Education at University of Pécs and member of the Scientific Committee for Pedagogy at the Hungarian Academy of Sciences. Her research topics include history of women's education in the eighteenth and nineteenth century, representation of Non-Western education in European sources in the nineteenth century and medieval history of Islamic education.

Pioneer Hungarian Women in Science and Education, edited by Réka M. Cristian and Anna Kérchy, presents thirteen portraits of Hungarian women born before 1945, all trailblazers in their scholarly or scientific fields. The book offers a bird's eye view of the attainments reached and challenges faced by exceptional academic or intellectual women, making visible careers in the disciplines of education and pedagogy, history and archaeology, astronomy, medicine, philosophy of art and musicology, mineralogy, botany, mathematics, chemistry and biochemistry. The volume's list of pioneer Hungarian women in science and education includes Terézia Brunsvik, Blanka Teleki, Zsófia Torma, Berta Degenfeld Schomburg, Vilma Hugonnai, Sarolta Steinberger, Margit Genersich, Valéria Dienes, Mária Dudich Vendl, Vera Csapody, Rózsa Péter, Margit Prahács and Ilona Banga.

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