

Curriculum Vitae Sir John Frederick W. Herschel

Name: Sir John Frederick W. Herschel

Life Dates: 7 March 1792 - 11 May 1871

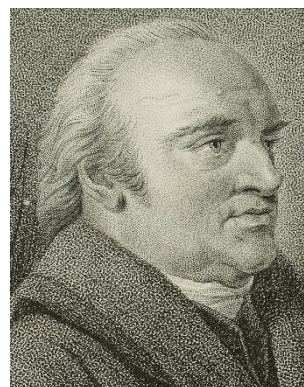


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Sir John Frederick W. Herschel was a British scientist and astronomer who created the first double star and nebula catalogues of the Southern Hemisphere skies. He discovered that the so-called Magellanic Clouds were not nebulae, but rather made up of a star clusters and other objects. To make astronomical observations of the sun, he developed the so-called Herschel wedge. He was also responsible for introducing the Julian day system to the field of astronomy.

John Herschel is considered a polymath, as he contributed to many fields of research. He published studies of the geology and botany of South Africa, translated Homer's Iliad into English and wrote articles for the Encyclopaedia Britannica.

Academic and Professional Career

Sir John Frederick W. Herschel studied mathematics and physics at Cambridge from 1809 to 1813. For his excellent exam results, he received the Smith's Prize and was named Senior Wrangler in mathematics, a title reserved for outstanding intellectual performance in the United Kingdom.

Together with his fellow students George Peacock and Charles Babbage (who would later be considered to be the "father of the computer"), he founded the Analytical Society of Cambridge.

After graduating from Cambridge Herschel transferred to London to read law, though he transferred back to Cambridge a year later, where he served as mathematics tutor and examiner. In 1816, he earned his Master of Arts and began working for his father, the astronomer William Herschel. Between 1821 and 1823, John Herschel worked with the British astronomer Sir James South on studying William Herschel's double star catalogue. He also improved various instruments and mirrors his father had developed.

Apart from astronomy and mathematics, Herschel also had an interest in physical and geometric optics. He studied the polarisation and birefringence of crystals and investigated the interference spectrum of light and sound waves.

In 1820, he founded the Royal Astronomical Society together with his father and twelve other scientists, and later served as the Society's president. Following his father's death in 1822, John Herschel extended and revised his lifework. Once he had completed his father's catalogue of the northern skies, he began documenting the southern skies.

From 1834, Herschel spent four years in Cape Town, where he bought the Feldhausen estate and set up a telescope. Today, the Herschel Obelisk is located there. During his time in South Africa, he not only described the southern sky, but also the local flora. He recorded his observations in about 130 coloured drawings.

During his stay at the Cape of Good Hope, he collected an extensive amount of data which was later published in the form of eleven catalogues of double stars, one catalogue of nebulae and star clusters, as well as one catalogue of double and multiple stars, which was released posthumously.

John Herschel is considered a polymath: He published studies on the geology and botany of South Africa, translated Homer's Iliad into English, published a book on the basics of scientific work and made contributions to the Encyclopaedia Britannica. He was also responsible for introducing the Julian day system to the field of astronomy.

Furthermore, Herschel was invested in physical and geometric optics and studied photographic methods for developing film material, such as a method that involves the fixation of silver halides to prevent them from further chemical reactions. He also improved the cyanotype (also referred to as blueprinting), a method for printing photos using iron, which results in images in shades of blue. Through the photographic process of chrysotype, also known as gold print, he discovered a process for recording images on paper that required colloidal gold in 1842. Herschel was the person to introduce the term "photography", as well as the use of "positive" and "negative" in this field.

After his return to England, John Herschel took over his father's position as director of the big observatory in Slough in South East England.

Honours and Awarded Memberships

Sir John Frederick W. Herschel was honoured with various titles and functions for his scientific works: He was named Knight of the Hanoverian Guelphic Order (1831), served as President of the Royal Astronomical Society (1848) and Master of the Mint of the Royal Mint, the official maker of British coins (1850).

Herschel also received numerous awards, such as the Smith's Prize (1813), the Copley Medal of the Royal Society (1821), the Lalande Prize of the Académie des Sciences (1825), the Gold Medal of the Royal Astronomical Society (1826 and 1836), as well as the Royal Medal of the Royal Society (1836 and 1840).

He was a member of several academies and scientific associations, such as the Russian Academy of Sciences, which named him an Honorary Member (1826), the Royal Society of Edinburgh, which also named him Honorary Member (1832), as well as the American Academy of Arts and Sciences (1832) and the American Philosophical Society (1854) as well as the German National Academy of Sciences Leopoldina (1857). Additionally, he was named Corresponding Member of the Académie des Sciences in Paris (1830) and he joined the Order Pour le Mérite for Sciences and the Arts (1842). In 1838, he was bestowed the title of Baronet of Slough in the County Buckinghamshire.

About John Frederick W. Herschel

Sir John Frederick W. Herschel was born on 7 March 1792 as the only child to the German-born astronomer William (Wilhelm) Herschel and his wife Mary Baldwin in Slough, Buckinghamshire. He was the nephew of the astronomer and musician Caroline Herschel.

From the age of eight, he received private tutoring and continued his education at the age of 17 at Cambridge.

Sir John Frederick W. Herschel had twelve children. His son William James Herschel led the development of dactyloscopy, a method for identifying a person using their fingerprints. Two of his sons, Alexander Stewart Herschel (1836 to 1907) and John Herschel (1837 to 1921) were also astronomers.

Sir John Frederick W. Herschel died on 11 May 1871 in Hawkhurst, Kent, and was buried at Westminster Abbey next to Charles Darwin and Sir Isaac Newton.

Several geographical places were named in his honour, such as the Canadian Herschel Island in the Beaufort Sea, Mount Herschel located in Antarctica, the South African settlement Herschel, as well as the moon crater J. Herschel. Furthermore, two plant genera were named after him: *Herschellia* T.E. Bowdich of the family of the Solanaceae and *Herschelianthe* Rauschert of the family of the Orchidaceae.