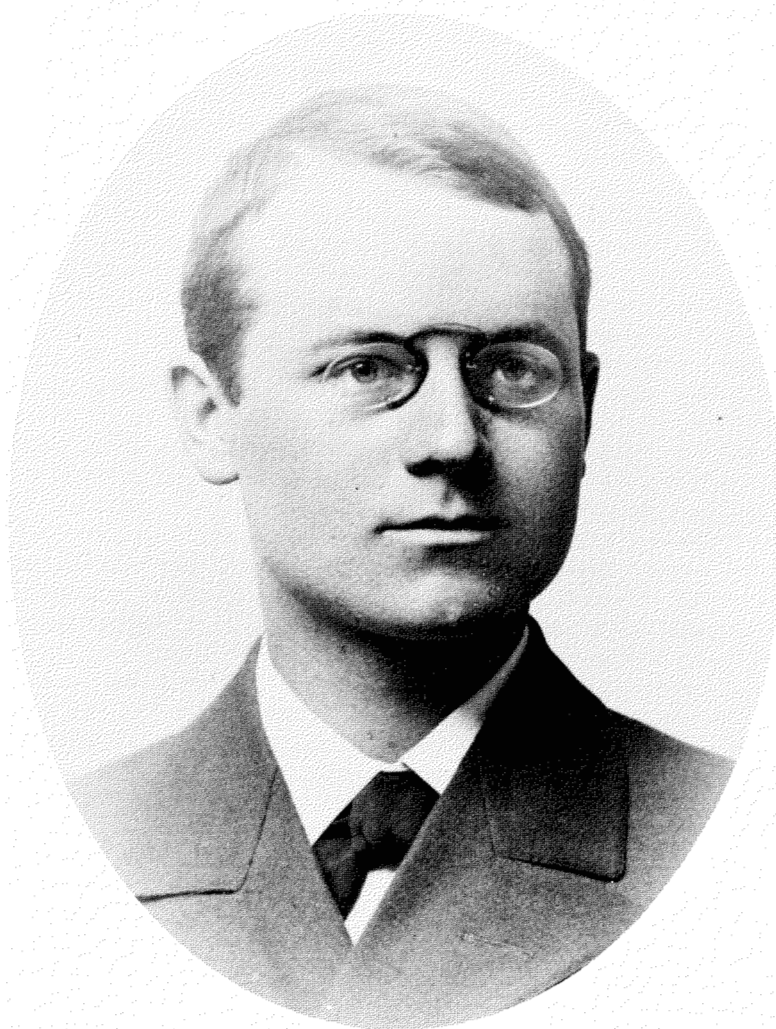


## Per Schei (1875-1905)



Per Schei (1875-1905). Photo donated by and published with permission of Jacob Schei and family, Trondheim, Norway.

Per Schei, Norwegian geologist and explorer, died a young man. From 1898 to 1902, as a member of Captain Otto Sverdrup's second expedition in the *Fram*, Schei made his mark on the geological understanding of a vast region of the eastern Canadian High Arctic. Schei died before he could write a detailed report for publication, but by the time of his death, his status as a talented scientist and outstanding expedition man was established.

Peder Elisæus Schei was born on 16 February 1875 in Snåsa, a part of the Trondheim district. The son of a farmer, he spent many years of his childhood in the family of his uncle, a parish vicar. Schei attended high school in Copenhagen, and in 1892 he passed his final examination with distinction. Schei showed an early enthusiasm for the natural sciences, and after schooling in Denmark he returned to Norway to study geology at the University of Kristiania (now Oslo). He graduated in mineralogy and geology early in 1898 with first class honours.

Two noteworthy events occurred prior to graduation: Schei's promising ability, recognised by his tutors, earned him a position as university amanuensis (lecturer) in the metallurgical

laboratory; and in 1897 he married Inga Jørgine Ulve, the daughter of a ship's captain, and they had a son. However, Schei also met his portion of misfortune: an illness left him with a stiff knee — hardly an attribute for a future arctic explorer.

In 1897-1898, Otto Sverdrup was organising a scientific corps for the second expedition in Fridtjof Nansen's polar ship, the *Fram*. Schei applied for the post of geologist and, despite his slight physical disabilities (he was also short-sighted), impressed Sverdrup so much that he was taken on. The choice was a shrewd one; in all respects Schei proved his full worth to the expedition, not only for the successful execution of his scientific responsibilities, but also for his participation in the long sledge journeys that led to the expedition's spectacular geographic discoveries.

In collaboration with Nansen, Sverdrup had decided to explore northernmost Greenland, and possibly to circumnavigate the subcontinent. Using the so-called Smith Sound route, Sverdrup was to direct *Fram* up the narrow channels separating Greenland and Ellesmere Island and winter in Greenland as far north as possible. These channels, now known as Nares Strait, had been

explored by British and American expeditions since the 1850s. Sledge parties from *Fram* were to delimit the northern part of Greenland and to reach as far south down the east coast as possible. There was to be, as Sverdrup remarked, "no question of trying to reach the Pole."

However, the Norwegian thrust north in the summer of 1898 was stopped by unfavourable ice conditions in Kane Basin. *Fram* had to winter off the Ellesmere Island coast south of 79°N, some 700 km from unexplored parts of the Greenland coast and, as it happened, only a short distance south of Robert Peary's winter quarters in the *Windward*. Peary was also enroute to the North. Another attempt the following summer to negotiate Kane Basin was thwarted by ice, and following this Sverdrup sailed *Fram* southward and westward into Jones Sound to spend the next three winters in southern Ellesmere Island. This was a fortunate decision: it led to the discovery and charting of "New Land" west of Ellesmere Island. Up north, it was left to Peary to prove the insularity of Greenland, in 1900. Actually, not until the summer of 1900 did Sverdrup give up the plan of following Nares Strait, and when he did the main consideration was the fervent interest generated during the first two years by the geographical and geological discoveries. Sverdrup concluded that his duty was "to go through with what he had begun"; there would be no forfeiting a thorough exploration of "New Land" for another summer in the tormenting ice of Kane Basin.

Schei took to expedition life quickly but not without mishap. After an episode of frostbite during early sledging on Bache Peninsula, which necessitated amputation of several toes on each foot, Schei developed into one of the most skillful dogsledge handlers and hunters on the expedition. His courage and dedication could not be overwhelmed by such small disabilities as a stiff leg, lost toes, and short-sightedness. Sverdrup liked him as a travel companion, with perhaps one misgiving — Schei did not smoke!

Sverdrup's well-organized and coordinated team work produced results unsurpassed in arctic exploration; the group of islands now named the Sverdrup Islands — Axel Heiberg, Ellef and Amund Ringnes, King Christian, and smaller islands — were discovered and mapped, and the entire western coast of Ellesmere Island and much of northern Devon Island were charted. Schei participated in some of the longest and most arduous sledge journeys, for example a trip with Sverdrup, during the final sledging campaign of 1902, northward up Nansen Sound to reach the Arctic Ocean and the northwestern tip of Ellesmere Island. They discovered coal measures at Stenkul Fiord (Ellesmere Island) and determined that Axel Heiberg is an island. Schei identified the volcanic rocks at Sorte Væg (Svartevæg on the expedition charts; both names meaning "black wall"). (The dark cliffs have been named Svartevæg Cliffs on Canadian maps.) Sverdrup and Schei returned to the ship on 16 June 1902, only weeks before *Fram* was finally released from her winter berth, ready for the voyage home.

The geographic and scientific advances achieved by Sverdrup's expedition rank it as one of the most successful in the history of arctic exploration, and Schei returned with a rich geological and paleontological collection from a hitherto unknown region. In 1902 the expedition committee elected him as chief scientific editor for the proposed official reports, and in 1903 he took up a coveted amanuensis appointment at the

University of Kristiania's mineralogical institute. The government, in recognition of his contribution to the scientific program of the expedition, awarded Schei an extra gratuity of 4000 kr.

In May 1903 Sverdrup and Schei were honoured at a meeting of the Royal Geographical Society in London. Schei's summary geological account was read to the society, as was Sverdrup's address, by the president, Sir Clements Markham.

Schei's preliminary accounts appeared in 1903 in several languages, and these papers, although only a few pages each, were regarded by his contemporaries as forming some of the most important contributions ever made to arctic geology. Aware of the mammoth task of dealing with the extensive collections, Schei induced a number of specialists in Europe to identify and systematically describe the fossil assemblages. Only one treatise appeared in Schei's lifetime, but by 1917 ten geological reports had been completed, and Professor Olav Holtedahl concluded the four-volume work with a summary report based on Schei's diaries. One can only wonder how much greater Schei's contribution to arctic geology would have been had he lived.

Professor W. C. Brøgger noted Schei's decline in health early in 1905. Later that year, Brøgger wrote that "he was seized with a severe illness and after a long suffering the promising career of this amiable and talented scientist came [to] a close on 1st November, 1905." Schei died of dropsy, a result of kidney malfunction that was thought at the time to be related to the four strenuous years in the far North.

Schei's name is firmly established in the literature and legend of the Canadian High Arctic: Schei Peninsula (Axel Heiberg Island), Schei Point (Ellesmere Island), the Schei Point Group (shale, siltstone and sandstone beds of Triassic age), and the Schei syncline (a large fold structure of southern Ellesmere Island). Schei can be credited with making the most impressive contribution by a single person to the geological understanding of the Arctic Islands prior to the advent of aircraft.

#### FURTHER READINGS

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