

## OBITUARY



PAUL-LOUIS MERCANTON—1876–1963

PAUL-LOUIS MERCANTON was born on 11 May 1876 at Lausanne where he was educated. He received his Diploma in Electrical Engineering in 1899 and his *Doctorat ès Sciences Physiques* in 1901.

He appeared to have been attracted more by pure scientific research than by engineering and he worked for a time under Professor Röntgen at Munich. In 1904 he joined the staff of the University of Lausanne, first in the School of Engineering and then in the Faculty of Science where he taught geophysics, meteorology and exploration topography (1920–38). From 1934 until 1941 he was in charge of the Swiss Central Meteorological Station at Zürich. After his retirement he lived in Lausanne where his distinctive figure was well-known to everyone and where he was visited by friends from all over the world. He died on 25 February 1963 and, in accordance with his wishes, his ashes will be scattered on the Rhône Glacier, from where they will eventually be carried to the Provence which he so much loved.

By the time of his death he had published some 400 papers covering an unusually wide range of subjects which included geophysics, glaciology, meteorology and archaeology. He was a man of broad interests and culture and his infectious enthusiasm made him an originator in many fields. For example, he endeavoured in 1912, although without success, to receive time signals in Greenland by means of a small crystal receiver; and he is recognised as one of the pioneers of radio-telegraphy and telephony in Switzerland.

Nevertheless Mercanton devoted the best part of his scientific effort to glaciology. Inspired by the great Swiss glaciologist F. A. Forel (1841–1912) his intense interest in glaciers began very early in his career; and his first observations appear to have been made on the texture of the Orny Glacier in July 1896. In 1897 he visited the Glacier des Bois (Chamonix) by himself in order to study its grain structure. In September 1900, with the help of an assistant,



he made a boring in the Trient Glacier to a depth of 12.25 m. in four hours. The tools used were of his own design and their success was essentially due to the use of water to carry away the ice dislodged by the drill. This fruitful piece of work attracted the attention of Swiss scientific circles and Mercanton was awarded the Schläfli prize for 1901 by the Société Helvétique des Sciences Naturelles (S.H.S.N.).

From that time on Mercanton was a constant and original contributor to all glaciological studies. He established scales to measure the level of the firn at Orny in 1902, on the Eiger in 1906, and at Diablerets in 1907 and analysed the observations that had been made since 1874 on the Rhône Glacier. The latter he published under the title "Mensurations au Glacier du Rhône, 1874-1915" (*Neue Denkschriften der Schweizerischen Naturforschenden Gesellschaft*, Bd. 52, 1916, p. 1-190), a monumental memoir that must be considered as one of the main contributions to world glaciology.

On Forel's death in 1912 he took over the general control of studies of the variations in the length of Swiss glaciers, a position he held until 1955. He continued to supervise the work on the Rhône Glacier until his death, and, in fact, visited it as recently as September 1962. He became a member of the Glacier Commission of the S.H.S.N. in 1909 and from 1918 to 1949 presided with authority over the Commission of which he remained a member until his death.

From 1907 to 1955, alone or in collaboration, he was responsible for the publication of reports on the variations of the Swiss glaciers. From 1913 to 1959 he was responsible, under the auspices first of the International Glacier Commission, and then of the Commission for Ice and Snow of the International Association of Scientific Hydrology, for many useful syntheses on the variations in the lengths of European glaciers. In addition, he was also a member of the Committee of this Commission, first as Secretary and then as Vice-President.

From 1919 to 1926, Mercanton made a number of efforts to develop physical methods for the measurement of the thickness of glaciers including the use of explosives, ultrasonics and geophones. In his determination to find a solution to this problem he was quick to see that use was made of the seismic method successfully employed by Mothes on the Pasterze and Aletsch Glaciers. The new method was applied to the Rhône Glacier in 1931 and 1933 and to the Unteraar Glacier between 1936 and 1948. Although his meteorological responsibilities at Zürich prevented him taking part in the field-work it was none the less true that he was its tireless and enthusiastic promoter. From that time on seismic methods have been extremely fruitful both in alpine and polar glaciology.

In 1910 Mercanton explored a number of glaciers in Norway and Spitsbergen and was a member of Alfred de Quervain's Swiss expedition to Greenland in 1912. While the latter crossed the ice sheet from west to east Mercanton directed the work on its margin.

In 1921 he visited the island of Jan Mayen and, with Sir James Wordie, made the first ascent of Beerenberg. In 1929, during a cruise with J.-B. Charcot in the *Pourquoi Pas?*, I had the honour to be Mercanton's assistant during his geodetic determination of the height of Beerenberg. I was thus able to appreciate the care that he gave to all his observations and measurements.

Paul-Louis Mercanton brought to his research a scientific honesty and rigour from which he never departed; and what he expected from himself he expected also from others. Moreover his critical faculty did not make him tolerant towards those less conscientious than himself from whom he took no pains to hide his opinions. On the other hand, those who had his confidence and esteem were treated to his vast fund of knowledge—he had an astonishing memory—and to his, often valuable, suggestions. With all this, behind the scholar there was the man, gay and witty, full of original ideas and with a passionate love of life.

Paul-Louis Mercanton, a pioneer of alpine and polar glaciology, has left a life's work of exceptional richness and one that fills us with admiration. He is survived by his wife and only daughter.

ANDRÉ RENAUD