needed in handling them, the scientific approach rather than the political or opportunistic approach is demanded. Whether directly in the government service or indirectly in universities or industries of the country, there is no doubt but that men of the type found in the Society of Sigma Xi will find ample scope for their best efforts and in those efforts they will find careers of usefulness and of satisfaction.

OBITUARY

JOHN JAMES RICKARD MACLEOD

JOHN JAMES RICKARD MACLEOD, M.B., Ch.B., D.Sc. (University of Toronto 1923, University of Pennsylvania 1928, Jefferson Medical College 1928), LL.D. (University of Aberdeen 1924 and Western Reserve 1928), D.P.H. (Camb.), F.R.S., F.R.S. (Can.), was a son of the manse, born at Cluny, near Dunkeld, Scotland, in 1876, a son of the Reverend Robert Macleod. He was educated at Aberdeen Grammar School, Marischal College, Aberdeen and Cambridge University.

After a short period of postgraduate study on the Continent and in London, like many another Scot, he migrated to the United States. At the early age of 27 years, he was appointed professor of physiology at Western Reserve University, Cleveland, Ohio.

Here he established for himself a reputation as a teacher of physiology and an investigator in the field of carbohydrate metabolism, which attracted the attention of the authorities in Toronto. In 1918 Professor Macleod was appointed to the chair of physiology at the University of Toronto, where he remained till 1927. He took a keen and deep interest in medical education and was instrumental in the establishment of the six-year course in medicine at the university here.

Soon, his laboratory attracted a group of young workers in physiology. It was due to Professor Macleod's established reputation as an authority in carbohydrate metabolism that Dr. Banting, now Sir Frederick, came to Toronto to consult him and to pursue his investigations on the pancreas with the assistance of C. H. Best, then a young assistant, who eventually succeeded Professor Macleod as professor of physiology at the University of Toronto. These investigations led to the brilliant and important discovery of insulin by Dr. Banting and Mr. Best.

With the aid of Dr. J. B. Collip the first stages of purification of insulin were undertaken and arrangements made for its commercial production. For the final purification, a large group of workers contributed, including Professor P. A. Shaffer, of Washington University, St. Louis, and Professor J. J. Abel, of the Johns Hopkins University, Baltimore.

In recognition of this very important discovery, Dr. Banting and Professor Macleod were awarded jointly the Nobel Prize, the former sharing the award with Dr. Best and the latter with Dr. Collip.

In 1927 Professor Macleod returned to his alma mater as Regius professor of physiology, an honor which he himself valued greatly. At the time of his death he was chairman of the department of research in the Rowatt Institute of the University of Aberdeen.

Many outstanding honors were accorded him from universities and scientific bodies in Canada, the United States and Great Britain, and he was the author of numerous books of physiology and biochemistry. Among such honors was the fellowship of the Royal Society, presidency of the American Physiological Society in 1922, the Royal Canadian Institute in 1925, fellow of the Royal Society of Canada, honorary fellow of the Academy of Medicine, Toronto, foreign associate fellow of the College of Physicians of Philadelphia, and corresponding member of the Medical Chirurgical Society of Bologne and of the K. Deutsche Akad. Natur-Forscher zu Halle. He was the winner of the Cameron Prize at the University of Edinburgh in 1923, and was a member of the American Physiological Society, the Society for Experimental Biology and Medicine, the Society of Biological Chemistry, the Association of American Physicians, the American Association for the Advancement of Science, the London Physiological Society and the Biochemical Society.

He is survived by his widow, Mary McWalters. He had no children.

VELYIEN E. HENDERSON
UNIVERSITY OF TORONTO

RECENT DEATHS

ERNEST B. SKINNER, professor emeritus of mathematics, for forty-two years a member of the faculty of the University of Wisconsin, died on April 3. He was seventy-one years old.

PROFESSOR THOMAS CRAMER HOPKINS, until his retirement in 1931 head of the department of geology at Syracuse University for thirty-one years, died on April 3 at seventy-three years of age.

Nature reports the death of Dr. B. M. Wilson, professor of mathematics in University College, Dundee, formerly lecturer in pure mathematics in the University of Liverpool, on March 18 at the age of thirty-eight years, and of Major-General Sir Richard M. Ruck, of the Royal Engineers, known for his scientific work in submarine mining and chairman of the council of the Royal Aeronautical Society from 1912 to 1919, on March 18, aged eighty-three years.