

## HELEN SAWYER HOGG, 1905-1993

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### Abstract

Canada lost one of its most famous and best-loved astronomers with the death of Professor Helen B. Sawyer Hogg in Richmond Hill, Ontario, on January 28, 1993. She was a life-long variable star observer who served as President of the AAVSO from 1939 to 1941, and maintained a keen interest in the Association throughout her life.

Helen Battles Sawyer was born in Lowell, Massachusetts, on August 1, 1905, and received her early education in Lowell public schools. Her university career began in 1922 with undergraduate studies at Mount Holyoke College. At the beginning of her time there she planned to become a chemist. However, an event in the winter of 1925 made her change her mind. There was a total eclipse of the sun on January 24, 1925, and her astronomy professor, Miss Anne Young, arranged for a special train to take the students to a site in Connecticut to view the eclipse from inside the path of totality. Years later, (Sawyer Hogg 1988) Helen said that "the glory of the spectacle seems to have tied me to astronomy for life, despite my horribly cold feet as we stood almost knee deep in the snow." A year later, in January 1926, Miss Annie J. Cannon of the Harvard College Observatory visited Mount Holyoke for a few days and Helen had an opportunity to meet with her several times. After their meeting it was arranged that Helen would go to Harvard to work with Dr. Harlow Shapley for graduate studies. She received an A.B. (Magna cum Laude) from Mount Holyoke in the spring of 1926 and started her work at the Harvard College Observatory a few months later. Helen was the first student that Shapley supervised for a doctorate on the subject of star clusters, the field in which he had made his name. She worked closely with Shapley during her years at Harvard and had her name on a dozen papers before she submitted her doctoral thesis. She received an A.M. in 1928 and Ph.D. in 1931, both from Radcliffe College, because at that time Harvard did not give graduate degrees in science to women.

In 1930 she married fellow student Frank Hogg, and after her graduation in 1931 they moved to Victoria, British Columbia, where Frank was appointed to the staff of the Dominion Astrophysical Observatory. In Victoria, initially as an unpaid volunteer, Helen started her own observing program with the 72-inch telescope to search for variable stars in globular clusters. In those days it was not considered proper for a woman to spend nights in the dome alone with male technicians, but since her husband was willing to chaperone her, she was able to do her observing. While the Hoggs were in Victoria their first child, Sally, was born. When barely a month old, even baby Sally participated in the family "globular Cluster enterprise" by accompanying her parents to the dome at night in her basket.

In 1935 the family moved to Ontario, where Frank joined the staff of the University of Toronto. Helen continued her observing program with the 74-inch telescope at the university's David Dunlap Observatory, and received her first appointment from the University of Toronto in 1936 as a Research Assistant. The

Hoggs' other two children, David and James, were born in 1936 and 1937, after the move to Ontario. Having three young children did not slow Helen down in her professional activities. She continued with her observing and publishing and in 1938 attended the IAU General Assembly in Stockholm, when the 250 delegates at the meeting were invited to the Royal Palace by the King of Sweden. In 1939 she traveled to the Steward Observatory in Arizona to photograph globular clusters that were too far south to be observed from the Dunlap Observatory in Richmond Hill, and secured 300 plates in six weeks. She also went that same year to Texas for the opening of the McDonald Observatory. In 1940-41 she was the acting chair of the astronomy department at Mount Holyoke. Her teaching duties at the University of Toronto started in 1941 during the second world war. In 1946, after the war, Frank Hogg became the Director of the Observatory, a post he held until his sudden death in 1951. In spite of this tragic loss, Helen kept on with her work and rose through the academic ranks at the University of Toronto to become a Full Professor in 1957. In 1976, she was appointed Professor Emeritus. In 1985, Helen married F. E. L. Priestly, Professor Emeritus of English at the University of Toronto. Professor Priestly died in 1988. However, during the brief time that he was married to Helen he also made a contribution to Canadian astronomy. He had two articles published in the *Journal of the Astronomical Society of Canada* in 1986 and 1987: "Halley Greets Newton's Principia" and "Newton and the Apple."

In the international astronomical community, Helen was very well known for her research on variable stars in globular clusters. She took over 2000 photographs and published more than 200 papers. Her knowledge of the night sky was phenomenal. Even on cloudy nights when she was scheduled to observe at the David Dunlap Observatory, she always watched for breaks in the clouds in case one of "her clusters" might appear. She never missed an opportunity. Her *Catalogues on Variable Stars in Globular Clusters* are valuable reference sources that are frequently cited in the literature. She published three editions, in 1939, 1955, and 1973, and was working on the fourth at the time of her death. An IAU Colloquium was held in honour of her life work in this field at the University of Toronto in 1972.

Over the years, she also wrote a number of articles on historical astronomy in the *Journal of the Royal Astronomical Society of Canada*, many of them in her feature *Out of Old Books*. However, she was probably best known for her work in public education. For thirty years (1951 to 1981), she wrote a weekly column entitled *With the Stars* for a major daily newspaper in Toronto. In 1970, she presented her own astronomy series for educational television, and in 1976 her popular book on astronomy, *The Stars Belong to Everyone*, was published by Doubleday Canada.

Professor Hogg was active in several professional organizations in addition to the AAVSO. On a leave of absence from Toronto in 1955-56, she became Program Director for Astronomy, National Science Foundation, Washington, D.C. She was President of International Astronomical Union Subcommittee: Variable Stars in Star Clusters (1955-1961), Royal Astronomical Society of Canada (1957-1959), Physical Science Section of the Royal Society of Canada (1960-1961), Royal Canadian Institute (1964), Canadian Astronomical Society (1971-1972), and councillor of the American Astronomical Society (1965-1968). In 1968, she was one of the first two women appointed as directors of the Bell Telephone Company of Canada and was re-elected as a director at every annual meeting until her retirement from the Board in 1978.

Throughout her distinguished career she received numerous awards and honours. In 1949, she won the Annie J. Cannon prize of the American Astronomical Society. In 1967, she received the Rittenhouse Medal of the Rittenhouse Astronomical Society, Philadelphia, the Service Award Medal of the Royal Astronomical Society of Canada, the Radcliffe Graduate Achievement Medal, and the Centennial Medal of Canada. In 1968, she was awarded the Medal of Service of the Order of Canada and

in 1976 was promoted to Companion of the Order, an honor limited to only 150 Canadians. In 1983, she received the Dorothea Klumpke-Roberts award from the Astronomical Society of the Pacific for her work in public education. She received the Order of Merit, City of Toronto in 1985 and the Sandford Fleming Medal of the Royal Canadian Institute that same year. In 1992, a few months before her death, the Commemorative Medal for the 125th Anniversary of the Confederation of Canada was conferred upon her. In addition, there were honorary degrees from Mount Holyoke in 1958, University of Waterloo in 1962, McMaster University in 1976, University of Toronto in 1977, Saint Mary's University in 1981, and the University of Lethbridge in 1985. She was honorary president of the Toronto Centre of the Royal Astronomical Society of Canada from 1972 to 1977, and national honorary president from 1977 to 1981. She held honorary life memberships in the Ontario Field Naturalists, the Royal Canadian Institute, the University Women's Club of Toronto, the Royal Astronomical Society of Canada, and Science North, Sudbury. In 1985, the Helen Sawyer Hogg lectureship was established in her honour by the Canadian Astronomical Society and the Royal Astronomical Society of Canada. Each year since, this public lecture has been delivered at the annual meeting of one of the two Societies. The most recent was given at the University of Victoria in June, 1993, and attracted an audience of 900. Two facilities were dedicated to her: the observatory at Canada's National Museum of Science and Technology in Ottawa and the telescope at the University of Toronto Southern Observatory in Chile. Asteroid 2917 was renamed Sawyer Hogg in her honour in 1984.

Professor Hogg was an important role model for women in the physical sciences. Throughout her life she encouraged women to pursue careers in science. In fact, only a few days before her death she participated in the taping of a video sponsored by the University of Toronto to attract young women into the sciences.

Although Helen Hogg's professional accomplishments are numerous, one cannot write an account of her life without mentioning what a gracious and thoughtful person she was. For decades she invited astronomy staff and students to her home for dinners and teas, and on winter days there was always a fire burning in the fireplace. There were many occasions when she brought her freshly baked hermits to functions at the Observatory or to meetings of the Royal Astronomical Society of Canada. She was also an expert knitter and made well constructed baby booties for generations of friends, relatives, and associates. No baby could kick off those booties!

Throughout her life she was devoted to her family. She had three children, seven grandchildren, and four great grandchildren. Her son, David, is a radio astronomer at the National Radio Observatory, Charlottesville, Virginia.

A funeral service was held at the Richmond Hill United Church on February 1, 1993, followed by interment at Lowell, Massachusetts, where Helen had been born 87 years earlier.

## References

Sawyer Hogg, H. 1988, In *The Harlow Shapley Symposium on Globular Systems in Galaxies*, IAU Symposium 126, eds. J. E. Grimm and A. G. Davis Philip, 11-22.

[Note: The above has been adapted from an obituary written by Christine Clement and Peter Broughton and published in the *Journal of the Royal Astronomical Society of Canada*, December 1993.]



Figure 1. Left to right, Peter M. Millman, Helen B. Sawyer Hogg, Terence Dickinson. Photo courtesy of Terence Dickinson.