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HELEN SAWYER HOGG, 1905–1993

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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.

Dr Hogg was an active member of the RASC for more than 60 years. She addressed meetings of nearly every Centre at one time or another from her first talk to the Victoria Centre in 1933 on the subject of the Magellanic Clouds to her invited lecture on variable stars at the Halifax General Assembly in 1980. Toronto was especially fortunate to be able to call her to speak on many

occasions on a wide range of topics. Dr Hogg was always interested in the functioning of the Society and served on the Toronto Centre Council during the 1940s and 50s before becoming national President in 1957. During her Presidency, she was influential in getting Council to meet for the first time outside Toronto and in the extension of the Annual Meeting to a two-day format allowing members to present papers. She prepared a promotional pamphlet on the aims and operations of the Society, and tried mightily to encourage those members who did not belong to a local Centre to feel a part of the Society. All these contributions, her keen interest, help and advice were recognized in the presentation to her of the RASC Service Award in 1967. These qualities were equally evident during her terms as Honorary President of the Toronto Centre (1972–77) and as Honorary President of the Society (1977–81). The Society's deep respect for Dr Hogg's scientific work was marked in 1987 when she became the only Canadian among 15 eminent Honorary Members.

In 1985 the Helen Sawyer Hogg lectureship was established in her honour by the Canadian Astronomical Society and the RASC. 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.

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, 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, 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, Annie J. Cannon of the Harvard College Observatory visited Mount Holyoke for a few days and Helen had an opportunity to meet her several times. After their meeting it was arranged that Helen would go to Harvard to work with the renowned Dr 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 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 programme with the 72-inch (1.8 m) telescope to search for and study 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 programme 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 Hogg's 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 General Assembly of the International Astronomical Union in Stockholm when the 250 delegates at the meeting were invited to the Royal Palace by the King of Sweden. In 1939 she travelled 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 chairman of the astronomy department at Mount Holyoke. Her teaching duties at the University of Toronto started in 1941 during the second world war. Later, reminiscing about those days, Helen said, "The war years at the David Dunlap Observatory were very hard. Dr John Heard and Dr Peter Millman enlisted in the Royal Canadian Air Force; Gerry Longworth enlisted in the Royal Canadian Navy; George Tidy, an assistant, ended up as a prisoner in a Japanese prisoner-of-war camp. Left behind were Dr R.K. Young, Dr Frank Hogg, with a heart ailment, [Helen] and Ruth Northcott, who ran the 74-inch telescope nights and taught classes at the St George campus of the University of Toronto by day. Hard years." 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. Priestley, Professor Emeritus of English at the University of Toronto. Professor Priestley 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 Society's JOURNAL 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, discovered hundreds of variables 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 just in case one of "her clusters" might appear. She never missed an opportunity. Her Catalogues of Variables 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, many of them in her feature *Out of Old Books*. However, to most Canadians, 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 the *Toronto Star*. In 1970, she presented her own astronomy series on TV Ontario, 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 RASC. On a leave of absence from Toronto in 1955–1956, she became Program Director for Astronomy, National Science Foundation, Washington, D.C. She was President of the American Association of Variable Star Observers (1939–1941), International Astronomical Union Subcommission: Variable Stars in Star Clusters (1955–1961), Physical Science Section of the Royal Society of Canada (1960–1961), Royal Canadian Institute (1964), 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. She was the founding President of the Canadian Astronomical Society when it formed in 1971.

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 was the first Canadian to be awarded the Rittenhouse Medal of the Rittenhouse Astronomical Society, Philadelphia; the same year she received 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. 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 held honorary life memberships in the Ontario Field Naturalists, the Royal Canadian Institute, the University Women's Club of Toronto, and Science North, Sudbury. Two facilities were dedicated to her: the observatory at the National Museum of Science and Technology in Ottawa, and the telescope at the University of Toronto's southern site in Chile. Asteroid 2917 was named 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. On this occasion, she gave some sage advice – "Not to know what's beyond is like spending your life in the cellar, being completely oblivious of all the wonderful things around us".

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 entertained RASC members, Department of Astronomy staff, students and their families, either at her home in Richmond Hill or at the University Women's Club at the campus of the University of Toronto. On many occasions she brought her freshly baked hermits to RASC meetings. 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 Astronomy Observatory, Charlottesville, Virginia, and a Life Member of the RASC.

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

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NOTES

The source of the two quotations by Dr Hogg are: *Shapley's Era* by Helen Sawyer Hogg in *The Harlow-Shapley Symposium on Globular Cluster Systems in Galaxies*, ed. J.E. Grindlay and A.G. Davis Philip, pages 11–22, 1988 (solar eclipse of 1925) and Transcript of Dr Hogg's speech at the Ceremony of Dedication of the Helen Sawyer Hogg Telescope of the University of Toronto Southern Observatory on June 19, 1992 (the war years at DDO).

Dr Hogg's personal papers have been donated to the Archives of the University of Toronto.

A small book aimed at young readers is *Helen Sawyer Hogg – A Lifetime of Stargazing* by Michael Webb, Copp Clark Pitman Ltd., 1991.