

Elsie MacGill

How does a King George High School graduate from Vancouver's West End become a Queen?

By Fred Hume
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It could be said that if your face and accomplishments appear on a stamp or impressive commemorative coin, you have made the grade. Your accomplishments are of national or even international acclaim. This is in fact the case with Vancouver-born and raised “war hero” Elsie MacGill who today you find on an attractive stamp and impressive commemorative 2023 “Loonie”.

The headlines in 1930 read, “She’s the Only Girl in North America Who Has Been Granted This Airy Degree”, that being a Master’s of Science in Aeronautical Engineering. This was followed by her Doctoral studies at MIT, all accomplished despite compromised health.

Notwithstanding her being a pioneering woman achieving these degrees, it was her work during the Second World War that vaulted her into public attention through articles, biographies, films, even a comic book, all emanating from the brilliance and curiosity of this young woman from a close-knit family living on Harwood Street in Vancouver’s West End. As the war began, and now chief Aeronautical Engineer at Canadian Car Works in Fort William (now Thunder Bay, Ont.), Elsie designed and tested the new “Maple Leaf Trainer” aircraft, the first plane designed by a woman.

At the same time, the media announced 35-year-old Elsie was honoured as the first woman to be admitted to the membership of the Engineering Institute of Canada and in 1940 the first woman in Canada to be inducted into the Association of Professional Engineers.

When her company (Cancar) was selected to build the Hawker

Hurricane fighter plane for the R.A.F. to battle the Luftwaffe over the English Channel, Elsie led her team, streamlining operations to very quickly build these planes while improving their design, shipping them out at a rate of 23 per week. "She has done a job experts said couldn't be done." At the same time she was responsible for the design of aircraft de-icing equipment as well as devising and conducting revolutionary stress tests, for which she won in 1941 the Gzowski medal— all this accomplished for the first time by a woman. This successful production gained for her the nickname "Queen of the Hurricanes" and it was opined, "This frail little woman (from Canada) who must walk with a cane, yet played a significant role in Britain's valiant war effort."

Elsie and her sister Helen grew up in Vancouver's West End, the daughters of pioneering female judge and suffragette, Dr. Helen MacGill – the first woman to receive an Honorary Doctor of Laws degree from UBC. Young Elsie began her public schooling at Lord Roberts Elementary at Nicola and Barclay (still standing), later to become an honours student at the West End's King George High School on Burrard street, graduating in 1921. The MacGill sisters experienced the finest of early Vancouver life, both influenced by and gaining life experience through their successful parents while enjoying such activities as being taught to swim at English Bay by Joe Fortes and taught art by a struggling Emily Carr.

Elsie and her sister were impressive students at UBC, both active in student affairs with Elsie being the only girl in UBC's Faculty of Applied Science. However, after two years Elsie found that UBC could not offer the precise engineering courses she was interested in; "UBC does not offer her wide enough scope in electrical work" were the words of the media at the time. Meanwhile her family had ties and tradition with the University of Toronto, so Elsie left UBC in 1923 to attain her Bachelor of Science degree at the U. of T. Despite being a rare female within a male domain, her nature, determination, and skills prevailed as she went on to achieve her "pioneering" Master's degree in Aeronautical Engineering at the University of Michigan. She received high praise at Michigan where she was described as "...very likely...the only one in the world at this present time" to achieve this particular degree.

During the war Elsie received public accolades such as, "110 pounds of charming genius" and "continues to overcome obstacles and sweep aside taboos". She was cited for employing hundreds of women at Cancar which was later acknowledged as the showcase of Canadian wartime production. Following the war, she served as Canadian Technical Advisor at the United Nations and assisted in

drafting international worthiness regulations for the design and production of civilian aircraft.

Elsie gradually became increasingly interested in the woman's movement, inspired by the work of her mother and grandmother. She became president of the Canadian Federation of Business and Professional Women's Clubs and in 1967 was named one of the commissioners on the Royal Commission on the Status of Women. She also wrote a book on the life of her mother, *My Mother the Judge* (1955) and in 2008 an academic biography on the life of Elsie was produced by Richard I. Bourgeois-Doyle, titled *Her Daughter the Engineer*.

Over her life Elsie received many honours, beginning at age 35 in 1940 when named Vancouver's Woman of the Year through to Hall of Fame inductions, numerous awards and medals and having two schools named after her. In 1971 she was named to the Order of Canada; two years later she received an Honorary Degree from the University of Toronto, and in 1975 she was named Honorary Alumnus by UBC. Even greater recognition would follow with Canada's stamp and commemorative coin.

Elsie died in 1980 at age 75 while visiting her sister Helen in Cambridge, Mass.

In 2006 a *Vancouver Sun* article announced, "Vintage plane sells for three million dollars: Microsoft billionaire Paul Allen buys restored 1941 Hawker Hurricane." After years of painstaking reconstruction, a rare piece of Canadian history built at Thunder Bay was bound for Allen's Seattle-area collection. This is one of Elsie's planes! Her legacy lives on!