

Mary Ward - An Irish Scientist

by Summer Morgan

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In this essay I plan to write about Mary Ward, a female Irish scientist. From reading this essay you will have learned about who Mary ward is, her early life, her scientific contributions and how they influenced modern life. You will then have the knowledge to find how important a person and scientist that Mary Ward was.

Mary Ward was born on April 24th, 1827. She lived in Ballylin, Co. Offaly. At 27 years of age Mary Ward wed Henry William Crosbie Ward (Offaly Historical & Archaeological Society 2014). This was seen as quite an old age to marry during the 1800s as up until 1972 women could be wed at the ages of 12 and 14, but most would marry by the age of 20 (Maggie Land Blanck 2012). She stayed at home while her only brother attended college as a university education was not available for women at this time. She was influenced by the strong scientific atmosphere at her aunt's house in Birr Castle upon many regular visits (Mollan 2007). Birr Castle's scientific nature is still maintained to this day as it has been transformed into a historic science centre that transports its visitors back in time to when Birr Castle was a threshold of scientific discovery and innovation (Heritage Island 2016).

Mary Ward developed a great interest in science at an early age. She was an avid reader of many articles in many modes of media. She built up her own library with books that related to the microscope and telescope, although her interests ranged a lot further. Tragically she died at the age of 42 due to a steam engine accident. Ward had been on a steam train with her husband, Captain Ward, when on turning a sharp corner she was thrown from her seat and gravely injured, causing death. She died from a broken neck, her death certificate recorded the cause as an "Accidental fall from a steam engine. Sudden". This death was one of the very first ever road/rail fatalities ever recorded in history (Mollan 2007). This may point to the fact that Ward lived at a time when science & technology were on the cutting edge as her accident occurred in 1869 and the invention and production of steam engine cars had only been started in 1825 (Hybridvehicle.org 2005).

At the start of Mary Ward's scientific career, before her marriage to Captain Ward, she used her microscope to build a reputation for herself as an observer of microscopic objects. Many would send her specimens to observe and to draw. For example she was sent the dried eggs of an aquatic insect. She then hatched and observed the changes under microscope. She recorded all of her findings and produced five/six copies of a small booklet which consisted of only six pages, in 1856. She named this booklet "A Windfall for the Microscope". This also contained some hand-coloured drawings. Soon after this Ward had 250 copies, consisting of 56 pages, of a collection of her sketches sent to her local printer and stationer. She distributed these and had sold out by the end of that year. This collection featured the wings of insects, scales of beetles, animal hairs, and down of birds.

Ward produced a selection of books on the telescope. Her first edition of this selection was named “Telescope Teachings”, and was then published in 1859. A total of seven editions of this book were produced, the last book being produced in 1893. These written works made her contribution to science and the study of microscopes and telescopes so successful and important as they offered very detailed insights into those fields of study, opening up many areas of discovery. Microscopes are used to view close up objects and used in the study of biology, whereas telescopes are used to view far away objects and are mainly used in the study of astronomy. The fact that all of her work was original lead to her work being highly commended and successful (Mollan 2007).

From thorough research it was found that Ward had only one one scientific collaboration, this was with Sir William Hamilton - a royal observer, mathematician, and astronomer at Dunsink Observatory (Irish Scientists’ 2016). In 1858, after observing Donati’s comet, she wrote to him seeking guidance for her mission to understand all astronomical phenomena. Due to her professional relationship with him, Mary Ward became one of only three women in the world to receive, and to be entitled to receive, “Monthly Notices” from Hamilton (Mollan 2007).

Ward was later awarded the distinction to attend the Greenwich Observatory in London, 1862. She won lasting fame as a pioneering woman who would not let adverse circumstances get in the way of her initiative and ambition. A basement room in her home, Castle Ward, is devoted to Ward and all of her scientific achievements. This room exhibits her books, microscope slides, drawings, the Ross microscope, and the Dolland microscope. Her scientific contributions are remembered in the Science Galleries at Birr Castle (Mollan 2007).

In conclusion Ward had a significant contribution to science despite having no university education. She was able to study and provide information on the microscope, telescope, and studied specimens. She produced a large amount of data to be shared through the books that she wrote. By learning about all of her achievements and seeing her passion for her work, one wonders what she could have discovered or even invented had she not died so young.

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GENERAL COMMENTS

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