



**Dr Julia Bell 1879-1979**

**Mathematician and Geneticist**

Julia was born in 1879 in Sherwood, the 10<sup>th</sup> child in a family of 14. Her father, James Bell, a self-made man originally from Scotland, ran a very successful printing shop in Nottingham. He was an accomplished cellist and a devout Churchman and believed passionately in female education and so provided Julia with the support and money to pursue a career. She went to Nottingham High school for girls and in 1898 Julia passed the entrance exam to Girton College, which had only just allowed female students to enter, though female students were not awarded degrees.

Julia then attained a Master's degree in maths 1907 from Trinity College in Dublin, for her work investigating solar parallax at Cambridge Observatory. She was one of a group of women labelled the 'steam boat ladies' due to their voyage overseas to get their degrees.

In 1908, she moved to University College London as an assistant in statistics working with Karl Pearson, Director of the Galton Laboratory. While working there in 1914 she attended the London School of Medicine for Women, where she received her medical degree in 1920. She then began work on volumes two, four and five of the *Treasury of Human Inheritance*, a five-volume set of books that catalogued and analysed genetic disorders. She worked on the *Treasury* for nearly five decades, and she maintained a relationship with the Galton Laboratory for most of her life. She did not retire until she was 86. Her

ability to link diseases, symptoms, and maths at a time when DNA did not exist and gene mapping for inheritable diseases was scientific fiction is phenomenal.

Julia was a brilliant mathematician and a Biologist who broke into new fields. She worked extensively on genetic conditions such as Fragile X syndrome (mental retardation)) and the consequences of Rubella during pregnancy. In 1937 she published a landmark paper on the link between colour-blindness and inheritance that was a major step toward the mapping of the human genome. This paper was written with eminent scientist J B S Haldane who has been described as the most brilliant scientist of his generation but Julia deserves credit here too.

Julia never married but did live with Margaret Matilda Cather, 14 years her senior for about 24 years; we can only speculate on their relationship but she was certainly devastated by her death. Afterwards she lived alone until the age of 97 when she went into a care home in Westminster and died aged 100.