

NEWTON, LILY (1893 - 1981), scientist

Name: Lily Newton
Date of birth: 1893
Date of death: 1981
Spouse: William Charles Frank Newton
Parent: Melinda Batten (née Casling)
Parent: George Batten
Gender: Female
Occupation: scientist
Area of activity: Science and Mathematics
Author: Gareth W. Griffith

Lily Newton was born in Pensford, Somerset, on 26 January 1893, the daughter of George Batten and his wife Melinda (née Casling). She was educated at Colston Girls' School in Bristol, where she was school captain. She studied Botany and Geology at Bristol University, having won the Vincent Stuckey Lean Scholarship, and graduated with first class honours in 1917. She stayed at Bristol to study for an MSc (1918) and a PhD which she gained in 1922.

After a short period as an assistant lecturer at Bristol (1919-1920), she moved to Birkbeck College, University of London as a lecturer (1920-1923) with Professor Helen Gwynne-Vaughan (1879-1967). It was there that she met the pioneering cytologist William Charles Frank Newton (1894-1927). They married in 1925 and Lily moved to Norwich where Frank was researching the process of mitosis with William Bateson (the first to use the term genetics in the context of biology) and Cyril Darlington at the John Innes Horticultural Institute. Despite surgery in 1926 Frank died on 22 December 1927. Lily stayed in Norwich and was appointed as a researcher at the John Innes Institute in order to prepare her late husband's work for publication.

In 1928 Newton was appointed lecturer in Botany at the University College of Wales Aberystwyth, where she was a member of staff until her retirement in 1958. She was promoted to Professor and Head of Department in 1930, following the death of Professor Wilfred Robinson. She was very active in College administration and in 1951 spent a year as Deputy Principal and then Acting Principal (1952-53) before the appointment of **Goronwy Rees**. She was awarded the degree of DSc by Bristol University in 1950 and LLD by the University of Wales in 1973.

The topic of her PhD research at Bristol and her first publications was seaweed, and her first substantial publication was *A Handbook of the British Seaweeds* published by the British Museum in 1931. This important book was widely used until the 1980s. Whilst in Aberystwyth she also worked on the industrial uses of seaweed, particularly agar (for the cultivation of pathogenic bacteria) and also carageenin (used in ice-cream and other foods).

Her third area of expertise was river pollution in West Wales caused by lead and zinc mining, and later the effects of dams on the biodiversity of rivers (in particular the rivers Rheidol, Ystwyth and Mawddach). After her retirement and her appointment as Emeritus Professor, she continued to be active in this field until the 1970s as a consultant to Cremer and Warner (Sir Frederick Warner's engineering company) and Rio Tinto Zinc.

She lived in Aberystwyth with her maid (also called Lily) in Cae Melyn until the end of the 1970s, and died at her godson's home in Pontardawe on 26 March 1981 at the age of 88.

Author

Gareth W. Griffith

Sources

A. O. Chater, *Flora of Cardiganshire* (Aberystwyth 2010)

E. J. Howells, M. E. Howells & J. S. Alabaster, 'A field investigation of water quality, fish and invertebrates in the Mawddach river system, Wales', *Journal of Fish Biology*, (1983) 22(4), 447-469

Gareth Jones, 'Lily Newton (née Batten) (1893-1981)', *British phycological journal*, 17(1), (1982), 1-4

Further reading

Wikipedia Article: [Lily Newton](#)

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Published date: 2018-09-03

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Griffith, G. W., (2018). NEWTON, LILY (1893 - 1981), scientist. *Dictionary of Welsh Biography*. Retrieved 9 Nov 2024, from <https://biography.wales/article/s12-NEWT-LIL-1893>

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