

## SEYLER, CLARENCE ARTHUR (1866 - 1959), chemist and public analyst

**Name:** Clarence Arthur Seyler  
**Date of birth:** 1866  
**Date of death:** 1959  
**Spouse:** Ellen Seyler (née Andrews)  
**Parent:** Clara Seyler (née Thies)  
**Parent:** Clarence Henry Seyler  
**Gender:** Male  
**Occupation:** chemist and public analyst  
**Area of activity:** Science and Mathematics  
**Author:** William Cyril Rogers

Born in Clapton, London, 5 December 1866, eldest son of Clarence Henry and Clara (née Thies) Seyler. He was educated at Priory School, Clapton, University College London, and the City and Guilds technical college, Finsbury. He had brilliant teachers in Alexander W. Williamson, Sir William Ramsay, Sir Edwin Ray Lankester and Daniel Oliver. He was assistant to W.M. Tidy, water consultant to London Hospital and then to Sir William Crookes in Kensington. In 1892 he joined William Morgan, Ph.D., public analyst and metallurgical chemist at Swansea Laboratories which were specially equipped for the instruction of students in chemistry, metallurgy and mathematics. When Morgan died in 1895 he succeeded him as director of the Laboratories and for the next 47 years he was proprietor and director of the Orange Street and later of the Nelson Terrace Laboratories where he served as Public Analyst for Swansea County Borough and the counties of Glamorganshire, Carmarthenshire, and Pembrokeshire. He was also retained as a private consultant to many industrial firms in south Wales and elsewhere. His inevitable involvement with the coal, gas, iron and steel, copper, zinc and other industries caused him to make the calorific value of coal a special study, and after reading his pioneer paper on the chemical classification of coal to the South Wales Institute of Engineers in 1900, he became in south Wales the recognised authority. After completing his World War I service with the R.A.S.C. he decided to pursue the analysis of coal by using the microscope. He had long decided that it was not a sufficient classification of coal 'species' to refer merely to their chemical components of carbon, hydrogen and oxygen, but that it was necessary to classify them petrologically and petrographically. He considered that the internationally accepted mineralogical classification used by Marie Stopes and other palaeobotanists did not go far enough because fundamentally it was lithological and if the remains of plant structures in each 'species' were to be properly assessed, the classification needed to be micro-petrological rather than just petrological. His idea of achieving this was to assess the homogeneity of the constituents which had definite optical properties and he succeeded in doing this by measuring the reflectance of polished samples of each 'species' under a microscope which he fitted with Berek's photometer. 'Dry' examination of the crystallographic magnification he found to be unsatisfactory, and his remarkable final results were achieved by using Kuhlwein and Stach's microscopy in which the lenses were in contact with oils of known refractive values.

Prolonged painstaking observation enabled him to draw the internationally acclaimed Seyler Coal Chart from which information about volatile matter and calorific values could readily be extracted. For this highly specialised work the South Wales Institute of Engineers awarded him its Gold Medal in 1931 and in 1937 the Bar to it. In 1941 he was awarded the Melchett Gold Medal of the Institute of Fuel.

After much heart searching he left Swansea, the true town of his adoption over a period of 50 unbroken years, at the end of 1942, in order to become General Consultant to the British Coal Utilisation Research Association and head of its Coal Systematics and Petrology Dept. He served in both capacities until 1957 and his reputation internationally was evidenced by his election in 1955 as the first president of the International Committee for Coal Petrology. Retiring in 1957, he remained an Honorary Consultant to B.C.U.R.A. until his death.

His publications include: introduction to Greenwell and Elsdon, *Analysis of British coal and coke* (1907); *Classification of Coal* (World Engineering Congress, Tokyo, 1929); *Petrography and the Classification of Coal*, I, II (1931, 1937); *Fuel technology* (1931); *Description of Seyler's Fuel Chart* (1933); *Selection of coals for steam raising* (1934); *Recent progress in petrology of coal* (Melchett Lecture, 1941); *Die Entwicklung der Kohlen-Petrographia* (1951); with W.H. Edwards, *The microscopical examination of coal* (1929); with Illingworth and Wheeler, *Report on explosions in anthracite stoves* (1924); and papers in the *Transactions of the South Wales Institute of Engineers*, and the Royal Society.

For his 'dilettante enjoyments', as he called them, after long weeks of laboratory work, he would apply his clear mind to difficult questions about the history of Swansea and Gower and offer lucid explanations of local place-names, in lectures to the Royal Institution of South Wales, Swansea, or in articles in *Archæologia Cambrensis*, e.g. 'Early charters of Swansea and Gower' (1924, 1925); 'Stedworlango: the fee of Penmaen in Gower'; (1920); 'Seinhenyd, Ystumllwynarth and Ynysgynwraid: some place-names and folk-lore in Wales' (1950).

He was president of Swansea Rotary Club, 1929-30, of the South Wales Institute of Engineers, 1931-32, of the Royal Institution of South Wales, 1932-33, and a member of the Council of the National Museum, of the Cambrian Archaeological Association and of Surrey Archaeological Soc. He was B.Sc. (London) and was awarded an hon D.Sc. (Wales) in 1938. He was also F.R.I.C.

He married Ellen Andrews in 1895 and they had 2 daughters. Athène Seyler, C.B.E., the actress who died in 1990 aged 101, was his sister. C.A. Seyler died at his home, Gaywood, Chine Walk, Ferndown, Dorset, 24 July, 1959.

### Author

William Cyril Rogers, (1911 - 1995)

### Sources

*Who's who in Wales*, (1937)

*Who was who?*

*Transactions of the South Wales Institute of Engineers*

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