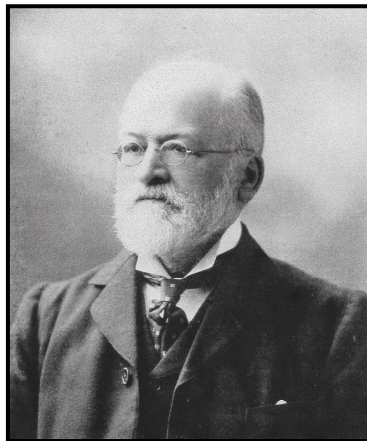


CHARLES CALLAWAY

BA MA BSc DSc FGS

(1838-1915)

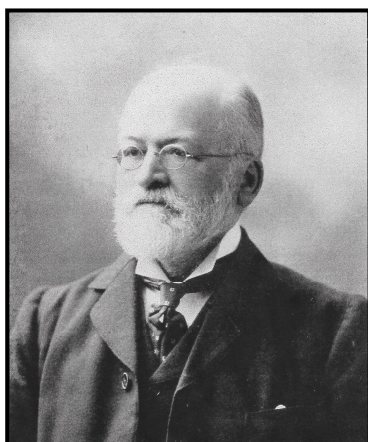


Born Bristol, 9 March 1838

Died Cheltenham, 29 September 1915

Charles Callaway BA MA BSc DSc (1838-1915)

I Introduction



Charles Callaway was an amateur geologist and a pioneer in the study of the Pre-Cambrian rocks of the British Isles. He challenged the findings of the British Geological Survey with regard to the mapping of the rocks surrounding the Wrekin in Shropshire suggesting that the Wrekin itself was Pre-Cambrian. He also challenged both Sir Roderick Murchison and the British Geological Survey in their reading of the structures to be found in the north-west Scottish Highlands. In both cases he was proved correct. His findings were also translated to the structures in the Malverns and in Anglesey.

Callaway was a Fellow of the Geological Society from 1875 to 1906 and was awarded the Murchison Medal in 1903.

Charles Callaway's life history is summarised in an obituary in the *Geological Magazine*, a technically based account, and more generally in the *Oxford Dictionary of National Biography* as reproduced below:

Callaway, Charles (1838-1915), geologist, was born at 2 Stratton Street, Bristol on 9 March 1838, the son of Lemuel Callaway, accountant, and his wife, Jane Williams. After schooling in Bristol and Cheltenham, he enrolled in 1859 at Cheshunt College, intending to become a Congregational minister, and during his studies he received support from the Castle Green Chapel, Bristol. In addition to the college curriculum in theology, Callaway sat for examinations in London University, where he took philosophy (BA, 1862) and philosophy and political economy (MA, 1863). His youthful interest in fossils, which he had collected from the nearby Lower Oolite, eventually led to two further London degrees – a BSc in geology (first-class hon., 1872) and DSc in geology and physical geology (1878). His results were consistently excellent in all subjects except theology.

After leaving Cheshunt in 1864 Callaway was called in 1865 to a pastorate in Kirkby Stephen, Westmorland, where he remained until 1868. He ministered at Wellington, Shropshire, from October 1869 until mid-1871, when he went to Bradford, to work as a librarian and museum curator. The noted American geologist James Hall met Callaway in 1872, and invited him to work at the New York State Museum at Albany. Callaway learned much palaeontology during his American sojourn (1873-4), though he later specialised in Archaean geology. After returning to England Callaway became curator of the Sheffield public museum, but felt obliged to resign in 1876 because of disagreements with one of the management committee. Following treatment at Malvern for a 'nervous illness', Callaway returned to Wellington, where, on 29 June 1876, he married Hannah Maria Clark (b.1832/3), a music teacher at Hiatt's Ladies' College there, of which her sister was principal. Hannah was a widow, and daughter of John Keay, boot manufacturer. On marrying, Callaway left the ministry and taught English, history, and science part-time at the college, thus having opportunity for geological researches. These were chiefly focused on the ancient rocks of Shropshire, Anglesey, the Malverns, and Scotland's north-west highlands.

Callaway studied particularly the rocks of the Wrekin area near Wellington. By 1873 he had discovered fossils near Shineton; they were apparently Upper Cambrian, but the government survey had mapped the rocks in which they occurred as Caradoc Sandstone (Silurian), (the Shineton Shales were later regarded as Ordovician, but this system was not proposed until 1879.) If the Shales were Upper Cambrian, the underlying Wrekin Quartzite was plausibly Lower Cambrian, and since this unit lapped around the volcanic ashes of the Wrekin, the hill was arguably Precambrian (Archaean). This interpretation differed from the survey's, which regarded the Wrekin's igneous rocks as intrusive, and the Quartzite as baked Caradoc Sandstone. Callaway joined the group of amateur geologists, dubbed

'The Archaeans', who took issue with several survey interpretations, and argued for the existence of a number of Precambrian sites in England and Wales. The observations and interpretations near Wellington were paralleled in the Malverns and also extended to rocks near Church Stretton, where Callaway introduced the term 'Uriconian' for one of the claimed Precambrian units.

Callaway's most significant work was in the north-west highlands of Scotland, where he challenged the interpretation of the structure long held by Roderick Murchison (1792-1871) and Archibald Geikie (1835-1924). Callaway mapped around Ullapool, Durness, and Eriboll in 1880-82 and established the geometrical and temporal sequence of a series of anticlinally folded rocks near Eriboll, thereby contributing significantly towards the unravelling of the geological structure of the district. His findings were confirmed and extended by Charles Lapworth, who invoked the idea of low-angle reverse faulting, and the formation of schists as a result of compression and movement. Callaway later applied such ideas to Anglesey geology. He also considered the problems of stratigraphic work in unfossiliferous Precambrian rocks, putting forward the idea that observers should make lithological comparisons and look for evidence provided by included pebbles. Study of anticlinal structures could yield information about stratigraphic sequences. Callaway proposed some 'long-distance' correlations – for example between various claimed Precambrian sites in Britain, and even between British and American units. Beside his work on ancient rocks, Callaway assembled a substantial fossil collection, was regarded as an authority on American Brachiopods, and studied local archaeology.

Callaway retired in 1898 and moved to Cheltenham, where he was the founder and first president of the Cheltenham Ethical Society. In his later years he became a militant agnostic, writing for the *Agnostic Annual* and serving on the editorial board of the *Rationalist Press*. He died of prostrate cancer at his home, 16 Montpellier Villas, Cheltenham, on 29 September 1915, and was buried without religious ceremony in Wellington cemetery. His indifferent undergraduate results in theology, as compared to with excellent marks in science and philosophy, perhaps suggest that he was never a fully committed Christian.

David Oldroyd Oxford Dictionary of National Biography 2004.

2. Charles Callaway and the Shrewsbury Museum

The above detailed life history gives due acknowledgement of Callaway's wide-ranging and persistent inquiries into the early geological history of the United Kingdom. Of particular interest are his Shropshire connections. They were on two fronts:

In the first instance Callaway 'kick-started' investigations into the Cambrian fauna and geological successions of the county which led, via Charles Lapworth, to the extensive studies of Edgar Sterling Cobbold based on Comley Quarry and surrounding area (Cobbold's work is detailed in a companion 'life' in this series).

Lapworth described a new species of *Olenellus* in 1891 which he:

... dedicated to his friend, Mr Charles Callaway, DSC, F.G.S., "who was the first to detect organic remains in the Comley Sandstone, and the first to demonstrate the presence of true Cambrian fossils in Shropshire generally; and whose original and sagacious inferences as to the probable Pre-Cambrian age of the unconformably underlying rocks the discovery of Olenellus places beyond much dispute" (*Geol. Mag.* December 1891 p. 532)

Secondly Callaway was appointed 'Honorary Geological Curator' for the geological collection at the Shrewsbury Museum, the first to be so appointed in 1895 - he had previously supervised some ten years earlier the presentation of the geological collection for its display in the new museum located at the Old Grammar School Building. On Callaway's retirement in 1898 the position of honorary curator was taken up by Robert Arthur Buddicom (see his life in this series).

Callaway was a member of the Philosophical Society, the Liverpool Geological Society, the Woolhope Naturalist's Field Club (based in Herefordshire) and the Cotteswold Naturalist's Field Club (based in Painswick, Gloucestershire). The latter provided the portrait of Charles Callaway shown above, this was probably taken at the time of his Presidency of the Cotteswold in 1904.



It is noted above that Callaway had a 'substantial fossil collection' now, in part, housed at the Geology Department of the University of Birmingham and at the Sheffield City Museum. Only the one Callaway fossil is held at Ludlow, a specimen of *Acaste apiculata* (Salter) from Soudley Quarry as shown left.

Charles Callaway therefore has only a limited connection with the fossil collection at Ludlow – he is literally hanging on by one fossil. But he is part of that co-operation between the amateur – school teacher Callaway, engineer Cobbold etc. and the professional; Professors Watts, Whittard and head of the Survey, Stubblefield etc., who combined together to delineate Shropshire's geology and its fossil fauna.

Acaste apiculata Soudley Quarry
(shyms: G.1977/463)

3. Family and death

As noted above Callaway married widow Hannah Maria Clark nee Keay on the 29th June 1876. There were no children from this marriage. Hannah Maria (Minnie) died in 1895 and is buried in Wellington. Charles Callaway moved to Cheltenham on retirement in 1898 living at 16 Montpellier Villas. On his death in 1915 his body was returned to Wellington and, after a non-religious funeral, he was buried with his wife in the town cemetery. The inscriptions on the headstone read:

*In loving memory of Charles Callaway MA DSc
Who died September 29th 1915
aged 77 years*

"Truth shall spring out of the earth"

*In memory of Hannah Maria (Minnie)
The beloved wife of Charles Callaway
of Sandown, Wellington
Born July 6th 1832 Died Nov 4th 1895
"Love is strong as death"*

The final word should be given to the writer of one of his obituaries, David Oldroyd author of tracts on the Archaean geologists, who quotes from the Hiatt College magazine :

"Dr Callaway, a much respected man in the scientific world, attended the college certain days of the week (complete in cap and gown) to lecture on English, History, Biology, Botany, Physiology etc., and Mrs Hiatt, perched up on a high chair on a wooden platform, watched with an eagle eye and marked down the unfortunate girls who were unable to answer the Doctor's questions."

The school was fortunate to have such a teacher.

Dr J. A. Gosling
August 2018

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