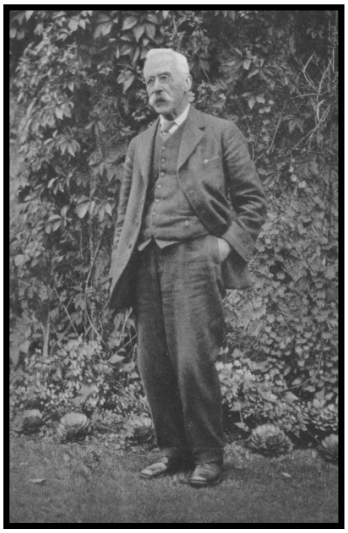
EDGAR STERLING COBBOLD

DSc AMICE FGS

(1851-1936)

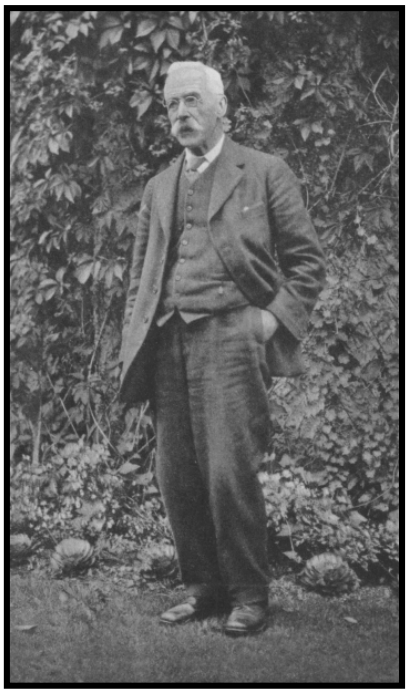


Born St Alban's 7 April 1851

Died All Stretton, Shropshire 20 November 1936

Edgar Sterling Cobbold DSc AMICE FGS (1851-1936) for proofing October 2018

1. Introduction



Photograph Dr C E Resser

*'The most complete development of fossiliferous Lower Cambrian in Britain is found in the classical sections of South Shropshire, whence most of our information is due to the indefatigable researches of Cobbold…' (*Whittard 1951*).*

'The discovery of the riches of the British Lower Cambrian fauna of trilobites, brachiopods etc., the oldest fossils to be found, is almost entirely due to E. S. Cobbold, of Church Stretton, Shropshire, who collected exhaustively from the locality of Comley. He was also the describer, in a series of papers of which that on fossil shells (1920) is one. This fauna was first found to be present in this area by Charles Callaway, and Charles Lapworth, in 1885, was the first to detect recognisable fragments of the characteristic Lower Cambrian trilobite, Callevia.' The Welsh Geological Quarterly **2** 1967.

'Edgar Sterling Cobbold D.Sc. A.M.I.C.E. F.G.S. was an amateur local geologist who, through dedicated and distinguished work on the Cambrian of the Comley and Wrekin areas gained much international recognition.'
Butler et al (2012).
Proc. Shropshire Geological Society **17** 22-32..

The above declamations were fully supported in a paper read by Professor William Whitehead Watts (1860-1947) to the Caradoc and Severn Valley Field Club following the death of Cobbold in 1936 and it is from this paper that the story of Cobbold's life and achievements can be outlined (see Appendix 3 for the full paper).

2. Family

Edgar Sterling Cobbold stemmed from a widely spread and prolific East Anglian family. His great grandfather John Cobbold (1746-1835) was a brewer – a family occupation lasting well into the 20th Century re the well known 'Tolley Cobbold' ale. His father, Rowland Townshend Cobbold (1821-1895) was a surgeon educated at Caius College, Cambridge and trained at St Georges Hospital, London. He was a keen naturalist. Edgar Sterling Cobbold was born in St Alban's, Hertfordshire on the 7th April 1851, one of a family of eight children. He was baptised at the Abbey on the 7th May of that year.

Cobbold trained as an engineer at Owens College, now the University of Manchester, having been schooled at Uppingham and Tonbridge. He then joined the firm of Mansergh & Co. founded by James Mansergh FRS (1834-1905). The company specialised in the design and construction of sewerage and water works including, for example, the Elan Valley pipeline. It is most probable that Cobbold's interest in geology was sparked by his direct involvement in excavation works for such projects, and this interest was perhaps supported by James Mansergh. Charles Lapworth's son, Herbert, was also a pupil of Mansergh prior to taking up his interest in geology. Cobbold's first published paper (QJGS 1880) was associated with his involvement in the design of the Oxford Sewage Works where he accounted for his observed variations in strata by postulating the existence of channels or lagoons in the Jurassic coral reefs, an observation which was confirmed by the work of others.

Cobbold married his first cousin, Alice Frances Shorting, in 1873 in Leyden, Essex - her father was rector at Stonham Aspall in Suffolk. Cobbold was a frequent visitor to the home of his uncle the Reverend R. H. Cobbold, Rector of Broseley in Shropshire at the time when his future wife was also living in Broseley.

The couple were living at Osborne House in Tunbridge, Kent at the time of the 1881 census but moved to Shropshire, probably in 1887, and were living in the Lower House, All Stretton, by the census of 1891. The house, a combination of the earlier 'Lower House' and a Georgian addition was known as Watling House by the time of the 1901 census. Watling House with its large garden was located just over two miles from the Comley Quarry.

Lower House/Watling House, All Stretton

The Cobbold Family Tree

Robert Knipe Cobbold m. Emily Mary Smith *Ipswich* 1814
1792-1859 1791-1869
|_____..... others
| | |
Dr Rowland Townshend Robert Henry Elizabeth Harriot
1821-1895 1820-1893 1817-1910
c. 27.07.1821 *Eye, Suffolk* c. 14.01.1820 *Eye, Suffolk* c. 24.04.1817 *Eye, Suffolk*
d. *Dedham* 19.12.1895 d. *Ross, Herefordshire* d. *Hereford*
| |
m. Sarah Frances Westhorp *Sudbury* 15.09.1846 m. Charles Shorting *Eye* 09.09.1837
1817-1891 1810-1864
b. *London* b. *Broome, Suffolk*
d. *Dedham* 06.06.1891 d. *Stonham Aspall*
|_____..... others |
| | |
Edgar Sterling Cobbold Fanny Mary Cobbold Alice Frances Shorting
1851-1936 1847-1941 1852-1925
b. 07.04.1851 b. 16.09.1847
c. *St Albans* 07.05.1851 c. St Albans 27.10.1847
d. *Church Stretton* 20.11.1936 d. *Braintree, Essex*
bd *Church Stretton* 23.11.1936
|
m. Alice Frances Shorting *Lexden, Essex* 1873
1852-1925
c. 01.02.1853 *Stonham Aspall, Suffolk*
d. *Church Stretton*

see also The Cobbold Family History Trust family-tree.cobboldfht.com

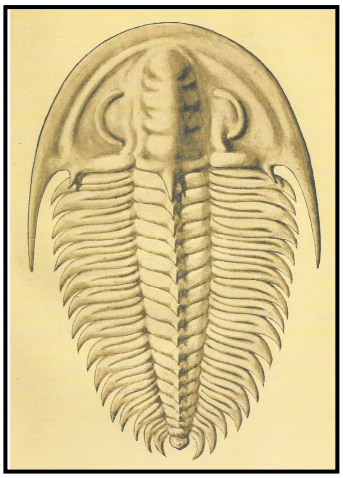
3. Towards the Cambrian

Edgar Sterling Cobbold is reported to have retired from his engineering work in 1886 just prior to his move to Shropshire – although he continued to work, perhaps as a freelance engineer, for example on the Maes Gwyn reservoir in 1898 (Shropshire Archives).

What brought Cobbold to All Stretton? Was it by design or was it serendipity that placed him so comfortably close to Comley Quarry the main source of his discoveries and of the many others who followed him? Let him describe Comley Quarry in his own words:

> *'The Comley quarry is so widely known that most geological visitors to the district wish to see it, and unless they come armed with some detailed information as to the beds, they are almost doomed to disappointment, for the fossiliferous bands are very narrow and not by any means obvious. A detailed description of the quarry as it now (1899) is therefore given. It will be seen to consist of two parts, west and east. The western portion has evidently not been worked for some time and is a good deal overgrown. The beds, which dip at a high angle (70° to 75°) to the east, have been worked back from the road along the strike towards the boundaries of the neighbouring fields. On the east the quarrymen have quite reached that boundary; but on the right of that part of the quarry now being worked, some softer beds have been left almost untouched, their dip slope forming a sort of wall. Lying against this in the further corner are beds now being quarried. On going into the quarry the beds on the left and left front are found to consist of greenish quartzose sandstones in beds about two feet in thickness, on reaching the furthest corner these are seen to rest upon a conglomerate bed full of smaller pebbles and larger lumps of brown claystone, the matrix containing a number of green grains, and immediately below this is a limestone of pinkish grey colour, the lower side of which appears concretionary in some soft shaley matter. This is the Paradoxides Limestone, and well weathered surfaces will show that it is largely made up of small fragments of carapaces. A few inches of shale separate this bed from a black or dark grey limestone in which small brachiopods are to be found. A few more inches of dirt or shale and we have reached the dip slope on the right of the eastern part of the quarry and at the same time the base of the representative of the Paradoxides or Middle Cambrian rocks.*
>
> *Below this the rocks are greenish sandstones softer in texture. About two feet behind the dip slope lies the famous Olenellus Limestone, its position marked by a hollow whence geologists have excavated the rounded dark red or purple concretionary lumps which contain innumerable fragments of Olenellus as well as Brachiopods. Lumps of this red material are generally to be found in the rubbish at the foot of the dip slope already mentioned. Beyond this to the west the typical greenish sandstone is seen by the abandoned part of the quarry. Lists of fossils found associated with Olenellus, and those with Paradoxides are given in Professor Lapworth's paper* already referred to, from which it will be seen that, as far as at present known, the faunas of the two limestones are distinct……*
>
> ** Lapworth Geol. Mag.3 Vol. vii, 1891, p. 532*

Extract from *Church Stretton, Some Results of local Scientific Research in Three Volumes Volume I 1900 Part I Geology.*

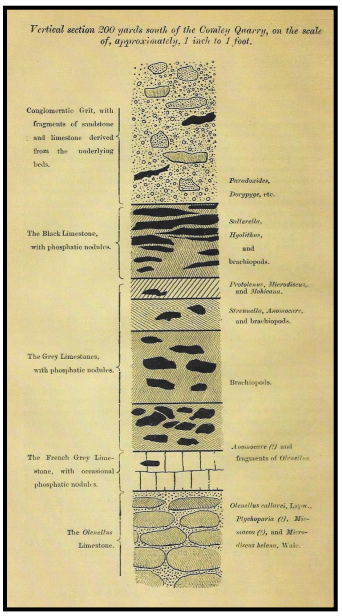


Having settled in the Church Stretton area Cobbold followed his Oxford researches with two papers, one in 1892 on the Silurian of Caer Caradoc for the Midland Naturalist and the second in 1904 on unconformities in the Church Stretton District for the Proceedings of the Geological Association, both were again primarily of stratigraphic interest (see the Watts Obituary).

As mentioned above, the first investigations of the Cambrian within Shropshire were undertaken by Charles Callaway (1838-1915) - his findings related to the Upper Cambrian (now the Tremadoc in the Ordovician Epoch). Charles Lapworth (1842-1920) had, in 1885, detected fragments of the genus *Olenellus* on the flanks of Caer Caradoc and, under his guidance, a Mr H. Keeping of Cambridge obtained sufficient fragments to enable Lapworth to recognise a 'large and well-marked species of *Olenellus*' (Lapworth 1888) which

he named *Olenellus Callaveri.* The importance of this find was that it was the first, and oldest, example of this species to be found in Britain, a species already found in North America and in Europe from the basal zones of the Cambrian.

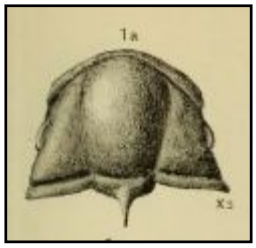
Cobbold joined Lapworth and his students in their hunts for *Olenellus* - Watts suggests that *'Contact with the genius and enthusiasm of the great geologist struck fire in a kindred spirit; a new direction and a fresh impulse were given by this deciding factor …. Cobbold resolved to devote himself for the rest of his life … to the elucidation of the Lower and Middle Cambrian'.* Cobbold was supported, and part funded, in his work initially by Charles Lapworth and later by a grant from the British Association.



Cobbold's first report to a Committee of the British Association was made in 1907 (see the copy of the handwritten opening page). The committee had been tasked to examine the 'Excavation of Critical Sections in the Palaeozoic Rocks of Wales and the West of England' regarding '*Some excavations in the Cambrian Rocks of Comley, Shropshire'.* This was a start to Cobbold's extensive reporting on Shropshire's Cambrian rocks - he continued to report to British Association at meetings through the years 1908 to 1912 and in 1915. Note that Lapworth and Watts were both members of the Excavation Committee.

The first published record of his findings was, however, made at an earlier date in 1901 in the '*Record of Bare Facts'* of the Caradoc and Severn Valley Field Club. It was not until 1910 that a first academic paper appeared in the QJGS regarding the Cambrian entitled '*On some small Trilobites from the Cambrian Rocks of Comley' (*QJGS **66** 19-51). The paper described the trilobites obtained from rock samples from excavations carried out 200 yards south of the Comley Quarry – see the vertical section left which identifies the *Paradoxide* and *Olenellus* layers.

Some 18 species and variants were described in the paper of which 11 were new species. Cobbold acknowledged the encouragement given by Lapworth and expressed indebtedness to Philip Lake (1865-1949) for help given in the identification of the trilobites.



Further papers followed - that in QJGS **67** of 1911 focussed on the Paradoxide beds of the Upper Comley sandstone and, amongst others, one described *Dorypyge lakeii* (Cobbold) where Cobbold made the following note: *'I dedicate this species to Mr Phillip Lake, who has so frequently befriended me in my study of the Comley trilobites and who first pointed out to me the reference to these fossils to Dame's genus'.* Lake was the author of a 1906 Monograph on British Cambrian Trilobites.

Dorypyge lakeii cranidium restored QJGS 1911 **67** Pl. XXV.

C104

~~Report~~

on some Excavations in the Cambrian Rocks of Comley, Shropshire — 1907

by E. S. Cobbold, F.G.S.

The locality of Comley has long been classical in geology as the only place in Shropshire where Lower, Middle, and Upper Cambrian rocks, occurring in juxta-position, are all known to yield fossils.

The chief point of interest has been the little Quarry of Comley in which both the characteristic genera of Trilobites of the two Lower & Middle divisions of the Cambrian System, namely Olenellus and Paradoxides, occur in close association were ~~first discovered in the county~~.

These rocks of the Comley district were first claimed as Cambrian by D^r Chas Callaway* in 1878 and paralleled by him with the Hollybush Sandstone of the Malvern district.

In 1888 Professor ~~Char~~ Lapworth† announced (C. Callaway, dap. cit.) his discovery of an Olenellus, from the band of purplish red calcareous sandstone of the Comley Quarry, which band has become generally known among English geologists as "the Olenellus limestone band of Comley ~~Quarry~~" or locally, ~~shortly~~, "the Olenellus limestone".

E. S. Cobbold: Draft opening page to the Report to the British Association 1907

Professor Jalasiewicz (2018) suggests that Cobbold's most significant work was the 1920 QJGS paper entitled *The Cambrian Horizons of Comley, and their Brachiopoda, Pteropoda and Gastrapoda etc.* Here a number of new species were described among which were the following:

Hyolithus sculptis
Hyolithus strettonensis
Salopiella oblique

Obolus parvenu
Obelella atalantica var. comleyensis

Obolella atlantica var. comleyensis (Cobbold)
QJGS **76** Pl. XXII fig 1

Also noted in the paper was a small shelly fossil named by Cobbold as *Lapworthella*, an enigmatic creature '*because despite nearly 100 years of study, no one quite knows what kind of animal lay under the hat-like skeleton* (Zalasiewicz & Williams).

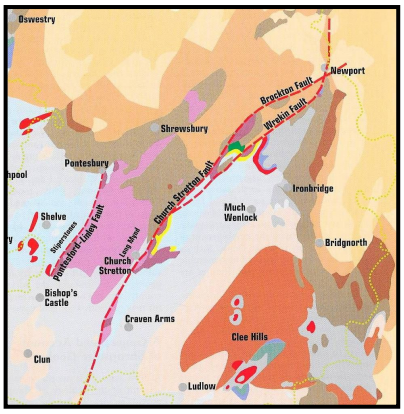
There followed a series of papers on the fauna and stratigraphy of the Lower Cambrian in the Church Stretton area. Cobbold was able to define the line of division between the Lower and Upper Comley Series by making a series of excavations and trial holes to the south west of Comley Quarry and thus confirmed the following formations:

Upper Cambrian Shales (the Shineton Shales of Callaway)
Upper Comley Sandstone
Lower Comley Sandstone
Wrekin Quartzite

- and was able to further divide the Lower Cambrian at Comley into eleven divisions and the Middle Cambrian into nine. In doing so he described ' *a dozen new genera and over a hundred new species of fossils …… the only evidence of such a population at all, when Cobbold was ten years old, was a few miserable shell fragments* (Watts).

As noted above Cobbold's work was reported to the meetings of the British Association at Dublin (1908), Winnipeg (1909), Sheffield (1910), Portsmouth (1911), Dundee (1911) and Manchester (1915). For the full list of published papers related to the Comley area see the attached Bibliography.

4. The Wrekin Area.



Shropshire is well known for the range of geological periods found in the county but there are only two outcrops of the Cambrian both aligned to the Church Stretton/Wrekin faults. The first, centred on Comley, was examined in detail by Cobbold over the years 1890 through to the 1930s. The second is located to the south of the Wrekin near Rushton and it was here that the Geological Survey, in revising the maps of Shropshire, called on Cobbold to help in the collection and determination of the fossils from natural exposures and excavations made for the purpose. Cobbold, worked with Roy Woodhouse Pocock (1885-1949) and delineated the Cambrian rocks and examined the found fauna as published in a one hundred-page plus joint paper in the Quarterly Journal in 1934.

Map taken from Peter Toghill's *Geology of Shropshire*,
The Cambrian areas are coloured yellow.

The general area had been examined by Callaway in the 1880s and later by Rhodes under the direction of Lapworth and just prior to Cobbold's investigations by Stubblefield and Bulman (QJGS 1927). The immediate area under investigation by Cobbold and Pocock lay between the Wrekin and Church Stretton faults and is centred on Charlton Hill and Dryton Brook where *'the Cambrian rocks are closely comparable to those of the Comley area some 12 miles to the south west…'* The Cambrian exposure was examined in a line of small quarries and stream sections with the addition of four excavations. A preliminary report on the findings was published by Pocock in 1928. Cobbold clearly called himself the 'senior author' in the joint paper.

Cobbold did not limit himself only to Shropshire. He published a paper on Cambrian *Hyolithidae* from Hartshill, Warwickshire in 1919 and also ventured into France to examine the Lower Cambrian Faunas from Herault and in addition described a new genus of *Trilobita* and a new species of *Conchostraca* from the Carteret Region of North West France. The publishing of these two papers in 1935 were part of a final flourish of seven papers given in the last few years of his life. Of note was a joint paper with Walter Frederick Whittard (1902-1966) on the *Helmeth Grits of the Caradoc Range* … (Proceedings of the Geological Society 1935). Cobbold travelled widely, to Bohemia, Poland, Scandinavia as well as to France.

Cobbold was awarded the Murchison Medal in 1921 and his *alma mater*, Owens College, by then the Victoria University of Manchester, conferred upon Cobbold the honorary degree of Doctor of Science at its jubilee in 1930. He was elected a Fellow of the Geological Society in 1879 at the time of the publication of his first paper on stratigraphy.

3. The Cobbold Fossils

Cobbold's type specimens have been deposited in the Natural History Museum, the Sedgewick Museum at Cambridge and those from the Rushton area in the Museum of the British Geological Survey at Keyworth. His duplicates are to be found in teaching collections and in local Museums including the Shrewsbury Museum – the Shrewsbury fossils are now held in the Ludlow Museum Resource Centre (see Appendix 3).

Lower Cambrian Fossils

The following examples are all from the Comley area:

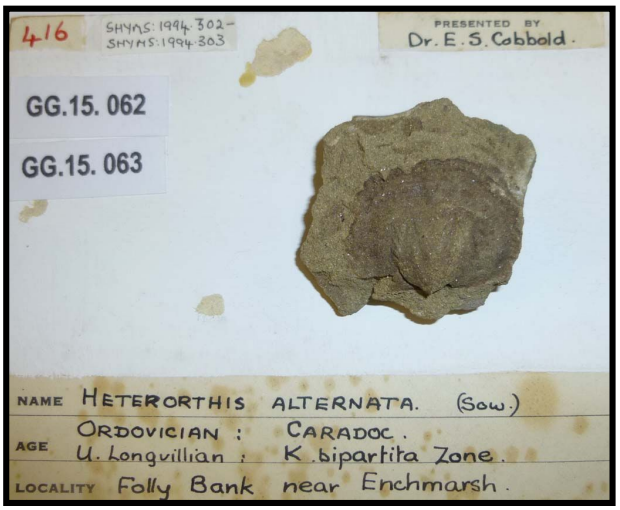
Trilobites	Weymouthia nobolis (Ford)
	Dorypyge lakei (Cobbold)
	Strenuella pustulata (Cobbold)
	Protolenus latouchei (Cobbold)
	Protolenus morpheus (Cobbold)
	Eodiscus lobatus
	Eodiscus bellimarginatus (Shaler & Foerste)
	Pagetia attleborensis (Shaler & Foerste)
	?Strenuella plancephala (Cobbold)
	Strettonia comleyensis (Cobbold)
Hyolitha	Hyolithus cf lenticularis (Holm)
	Hyolithus strettonensis (Cobbold)
	Hyolithus micans (Billings)
	Hyolithus bayonet (Matthew)
	Hyolithus crassus (Specon)
	Hyolithus cf. degeeri (Holm)
	Hyolithus sculptis (Cobbold)
	Hyolithus jonstruppi (Holm)
Coleoloids	Salopiella oblique (Cobbold)

Lingulata Obolus parvulus (Cobbold)

Brachiopods Acrothyra cf. sera (Matthew)
Lapworthella nigra (Cobbold)
Obolella atlantica var. comleyensis (Cobbold)
Obolella groomi (Malley)
Micromita labradorica (Billings)
Micromita phillipsi (Holl.)
Linguella viridis (Cobbold)

The majority of the Cobbold fossils are from the Ordovician and Silurian periods. A full listing is given in Appendix 3 - some examples, showing the typical method of display, are shown below. The GG numbers refer to the number allocated on the transfer of the fossils from Shrewsbury to Ludlow. The SHYMS Adlib numbers are Shrewsbury reference numbers from a 1994 listing.

Ordovician: *Watsella cf Wattsi* (Bancroft)



Silurian: *Heterorthis alternata* (Sowerby)

4. Local Interests

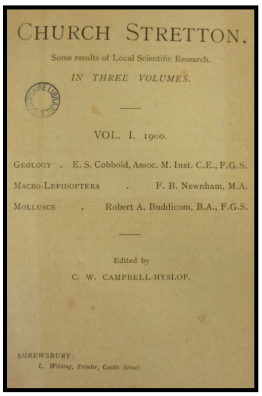
Cobbold's interests were wide. He joined the Caradoc Field Club (later the Caradoc and Severn Valley Field Club) becoming the first honorary secretary and treasurer of the newly conjoined club in 1891. On resigning from this position he became a Vice-President of the Club. Together with the Rev. J. D. la Touche he initiated the publication of the Club's '*Records of Bare Facts*' covering botany, etymology, meteorology as well as geology. He regularly gave talks on a wide range of subjects including, for example, *The Origin of Volcanoes* (1891), *The Black Forest of Germany* ((1895) and *Roman Baths at Bath* (1904). But his main contributions related to geology. He led many excursions and became the 'Referee' for Geology on the death of la Touche. He initiated two specific exercises. In 1899 he wrote in *Bare Facts*;

> *With a view of commencing a systematic collection and record of fossils from the various horizons of Shropshire, the following (fossils) have been deposited in the Shrewsbury Museum where they may be stored in boxes labelled to correspond with this list or in a few instances displayed in the show cases. The specific names are as appear probable to me, but they cannot in every case be absolutely correct. I hope however they may be sufficiently accurate to render the specimens easily accessible to those studying either the forms of separate horizons, or the specific genera of groups of forms. The localities will be registered on the Club Map (1" Ordnances Survey) and described as accurately as possible.*

On reporting of the Geological work of the Club in 1901 he notes that:

> *At the last annual meeting I was requested to organise a series of meetings specially for the study of geology …. In seeking an object for these excursions I felt that the interests of the Geology of this county are so multitudinous that it would be better to confine our attention to one set of phenomena and get clear ideas upon it, rather than range over the many diverse objects of enquiry that were suggested to me. The excursions were therefore confined to visits to the exposures of the Caradoc or Bala series of the Ordovician System, and I think we may say that we gained definite ideas, both of what a geological series may be, and of the manner in which the rocks are linked together by the recurrence of several species of fossils throughout the various different strata which go to make the series……. In addition to the principal object of the excursion we collected all the fossils we could, carefully keeping them separate both as to locality and geological horizon – and these fossils have been sent to Mr Ruddy, one of our honorary members. He has kindly put himself to the trouble of examining and identifying all. The specimens are deposited in the Shrewsbury Museum, and form a considerable addition to the collection of local fossils……..*

One gets the feeling that Cobbold is himself learning as he goes on – and relying on the expertise of others for the identification of the fossils all leading up to the major task ahead, the Cambrian fossils of the Lower Cambrian – and by 1908 he is claiming that his time is limited as to the leading of Club excursions because of his work for the British Association……..


CHURCH STRETTON.

Some results of Local Scientific Research.

IN THREE VOLUMES.

VOL. I. 1900.

GEOLOGY . E. S. Cobbold, Assoc. M. Inst. C.E., F.G.S.

MACRO-LEPIDOPTERA . F. B. Newnham, M.A.

MOLLUSCS , Robert A. Buddicom, B.A., F.G.S.

Edited by

C. W. CAMPBELL-HYSLOP.

SHREWSBURY:

E. Wilding, Printer, Castle Street.

Cobbold's other main focus was on the town of Church Stretton. He co-edited the three volumes entitled *Church Stretton* together with C. W. Campbell-Hyslop, contributing a section on the Geology of Church Stretton in Volume I and writing the whole of Volume III on *Archaeological Remains*. Note that Robert Arthur Buddicom was also a contributor to Volume I.

Cobbold also edited the numerous editions of *Church Stretton Illustrated* over the years 1891 to 1937. The last edition included a posthumous contribution on the geology of Shropshire, an updated version taking account of recent work undertaken by the Geological Survey. Many editions were illustrated with photographs taken by Cobbold.

Cobbold's home at Watling House '*with its dining room lined entirely with specimen cabinets, became a home away from home for geology students from all over the world was open house to many visiting geologists'* and his garden '*was a joy to himself and his friends', and was famous for its beauty and attractiveness*. Watts noted that Cobbold *was 'an admirable botanist with a wide knowledge of plants, both local and general'*. Cobbold was very much involved in local activities both in the town of Church Stretton and especially with regard to the church of St Michael and All Angels in All Stretton newly built in 1902 where he acted as a church warden.

5. Death

Ernest Sterling Cobbold died on the 20th November 1936 and was buried three days later in Church Stretton. His wife, who was for many years an invalid, had passed away some 11 years previously '*Her death in 1925, after half century of happy married life, was a great blow from which he recovered but slowly*'. Cobbold was - giving the final word to Professor Watts - *'a typical "amateur" geologist, belonging to a type of which Shropshire produced so many, some of them already mentioned: men who used their means and time to advance the science out of their pure interest and love for it.*

Edgar and Alice Cobbold in the Garden of Watling House
Photograph courtesy of Valerie Morris

But it would be fascinating to hear what Cobbold would have made of a paper published in the month of May 2018 whereby a group of geologists isolated 'small shelly fossils' (*linguliformean* brachiopods and *Torellella*) from the Comely Limestones. They further isolated those where fossilisation was imperfect, ie where they retained biogenic phosphates, and confirmed this by scanning electron microscopy and energy dispersive X-ray before subjecting them to oxygen isotope analysis. By the analysis of oxygen 18 ratios they were able to suggest that surface sea water temperatures during the Lower Cambrian ranged from 20 to 25 degrees centigrade, an early Cambrian greenhouse climate ……this to be compared to the painstaking work required in the development of specimens by careful use of chisel and needle and dental mallet under a magnifying glass as employed by Cobbold……

Dr J A Gosling
October 2018

Sources

As previously mentioned, the paper given by Professor Watts to the Caradoc and Severn Valley Field Club provides a rich source on the life of Edgar Sterling Cobbold and has regularly been referred to in the above.

The Shropshire Archives has copies of many of Cobbold's papers plus also the papers re Cobbold's work on the repair of the Borough Waterworks reservoir and dam at Maes Gwyn in 1891-1901 (Ref. DA1/151/35). It also holds copies of the *Transactions* and the *Record of Bare Facts* of the Caradoc and Severn Valley Field Club.

Family details have been obtained from findmypast.co.uk and from the The Cobbold Family History Trust at family-tree.cobboldfht.com

Copies of *Church Stretton Vols I-III* are held at Ludlow and Church Stretton libraries and copies of *Church Stretton Illustrated* are held by the Shropshire Archives.

Comely Quarry is now a nature reserve managed by The Shropshire Wildlife Trust (see www.shropshirewildlifetrust.org.uk).

Cobbold Papers

Cobbold E S (1880) *Notes on Strata exposed in laying out the Oxford Sewage Farm at Sandford-on-Thames* Quarterly Journal of the Geological Society **36** 314-39.

Cobbold E S (1892) *The Silurian Outlier West of Caer Caradoc* Midland Naturalist **15** 217-221.

Cobbold E S (1904) *Unconformities in the Church Stretton District* Proceedings of the Geological Association **18** 442-443.

Cobbold E S (1910) *On some small Trilobites from the Cambrian Rocks of Comley, Shropshire* Quarterly Journal of the Geological Society **66** 19-51.

Cobbold E S (1911) *Trilobites from the Paradoxides Beds of Comley, Shropshire* Quarterly Journal of the Geological Society **67** 282-311.

Cobbold E S (1913) *Fauna of the Comley Breccia Bed (Shropshire)* Quarterly Journal of the Geological Society **69** 27-44.

Cobbold E S (1913) *Two species of Paradoxides from Neve's Castle (Shropshire)* Quarterly Journal of the Geological Society **69** 45-50.

Cobbold E S (1919) *Cambrian Hyloithidae etc. from Hartshill, in the Nuneaton District, Warwickshire* Geological Magazine **6** 149-158.

Cobbold E S (1920) *The Cambrian Horizons of Comley, and their Brachiopoda, Pteropoda, Gasteropoda etc.* Quarterly Journal of the Geological Society **76** 325-386.

Cobbold E S (1924) *Cambrian Fossils from the Nechells Breccia* Quarterly Journal of the Geological Society **80** 365-373.

Cobbold E S (1925) *Unconformities in South Shropshire* Proceedings of the Geological Society **36** 367-376.

Cobbold E S (1927) *The Stratigraphy and Geological Structure of the Cambrian Area of Comley* (Shropshire) Quarterly Journal of the Geological Society **83** 551-573.

Cobbold E S (1931) *Additional Fossils from the Cambrian Rocks of Comley (Shropshire)* Quarterly Journal of the Geological Society **87** 459-512.

Cobbold E S (1931) *Strettonoa comleyensis* Quarterly Journal of the Geological Society **87** 473.

Cobbold E S (1931) *Le Genre Olenopsis en France* Bull. Soc. Geol. France Ser 5 **1** 442.

Cobbold E S (1934) *The Cambrian Genus Stenotheca* Geological Magazine 463-468.

Cobbold E S (1935) *A new Genus of the Trilobita and a new Species of the Conchostraca from the Cambrian of the Carteret Region, N. W. France* Ann, and Mag. Nat. Hist. **15** 381-392.

Cobbold E S (1935) *Lower Cambrian Faunas from Herault, France* Ann, and Mag. Nat. Hist. **16** 225-248.

Cobbold E S (1935) *A Middle Cambrian Hyolithellus from Comley* Geological Magazine **72** 43-44.

Cobbold E S (1936) *The Conchostraca of the Cambrian Area of Comley, with a note on a new Variety of Atops reticulatus (Walcott)* Quarterly Journal of the Geological Society **92** 221-235.

Cobbold E S, Pocock W (1934) The Cambrian Area of Rushton (Shropshire) Philosophical Transactions of the Royal Society Ser. B **223** 305-409.

Cobbold E S, Whittard W F (1935) *The Helmeth Grits of the Caradoc Range, Church Stretton; their bearing on part of the Pre-Cambrian Succession of Shropshire* Proceedings of the Geological Society **46** 348-359.

Note Cobbold was a regular contributor to 'The Record of Bare Facts' and the 'Transactions' of the Caradoc and Severn Valley Field Club 1891-1934.

Other References

Butler S G, Hotchkiss K A, Rushton A W A (2012) *The Evolution of the trilobite* Strettonia comleyensis Proceedings of the Shropshire Geological Society **17** 22-32.

Lake Philip (1906) *A Monograph of the British Cambrian Trilobites* Palaeontographical Society.

Lapworth C (1888) *On the Discovery of the Olenellus fauna in the Lower Cambrian Rocks of Britain* Nature **39** 212-213.

Lapworth C (1891) *On Olenellus callavei and its Geological Relationships* Geological Magazine **8** 529-536

Natural History Museum Catalogue *Cobbold Edgar Sterling.*

Pocock R W (1928) *Summary progress* Geological Survey Mem Geol Surv.

Roden R (1991) *Shrewsbury Borough Museum Service Geological Collection: Collection Assessment and Report* Typescript, Ludlow Museum Resource Centre.

Stubblefield C J, Bulman O M B (1927) Quarterly Journal of the Geological Society **83** 96.

Toghill P (2006) *Geology of Shropshire Second Edition* The Crowood Press, Ramsbury.

Watts W W (1936) *Edgar Sterling Cobbold* Transactions of the Caradoc and Severn Valley Field Club 4th December 1936.

Zalasiewicz J, Williams M (2018) *Skeletons* Oxford University Press.

Obituary (1937) Proceedings of the Geologists' Association XLVIII part1 106-107.

Appendix 1: Obituary

EDGAR STERLING COBBOLD DSc FGS

By W. W. Watts Sc.D, LL.D, F.R.S.

A paper read before the Caradoc and S. V. Field Club
4th December 1936

E. S. Cobbold was born at St. Albans, of an East Anglian family connected with banking at Ipswich, on April 7th 1851, and died on November 20th, 1936, in his 86th year. He was the eldest son of Rowland Townshend Cobbold, a surgeon of Dedham Lodge, near Manningtree, Essex; a keen naturalist who took great pains to instruct and interest his children in the love and knowledge of birds, beasts and flowers, and probably of stones and fossils. While deeply interested in other sciences and pursuits generally, it is E. S. Cobbold's life work on geology that gives him a claim to the gratitude and respect of geologists in general, and especially those concerned with the geology of Salop; while his splendid and wholly unselfish character, his outstanding kindliness and generosity, and his services to the town of his adoption, leave to his friends and neighbours an enduring and affectionate remembrance.

He was a frequent visitor to the house of his uncle, the Rev. R. H. Cobbold, Rector of Broseley till 1873; and to this town during part of this time also lived his future wife, Miss Alice Frances Shorting, daughter of Canon Charles Shorting of Stonham Aspall, about ten miles north of Ipswich. It may well be that his interest and insight into geology were further stimulated by his uncle who, while a missionary in China, came across extensive coal workings in his travels. An account of them was forwarded by the Foreign Office, by order of the Earl of Clarendon, to the Geological Society, by whom it was published in 1856.

E. S. Cobbold's schools were Brentwood, Uppingham and Tonbridge, and his professional education as an engineer was at the Owens College, now Victoria University of Manchester, where he gained the Ashbury scholarship of £25 in 1871 and his Engineering Certificate in 1872. As one of the earliest students of the College, and in acknowledgement of his distinguished work, The University at its jubilee in 1930 conferred upon him the honorary degree of Doctor of Science.

Cobbold's further training in engineering was with the firm of Mansergh and Co., and among the various engineering works on which he was engaged were the surveying of part of the route of the pipe-line of the Birmingham Water Scheme at Rhayader, the sewage woks at St Albans, and those for Oxford at Sandford-on-Thames. The trial holes and trenches at the last exhibited much variation in the strata traversed, and on showing some of the specimens obtained to the Authorities at Oxford, he was encouraged to proceed with his investigations. In the paper on them, which was published by the Geological Society in 1880, he accounted for these variations, and differences between this succession and that of the type sections of Headingley and elsewhere, by postulating the existence of channels or lagoons in the Jurassic coral reefs in which sediments had been laid down. Though his explanation was received at the time with some scepticism, the recent work of Dr. Arkell has shown that it applies generally to the Corallian deposits of the district, where there was then a scattered group of isolated coral reefs.

Cobbold took up his residence it Church Stretton in 1886. In or before 1891 he was Secretary of the Caradoc Field Club and, in conjunction with the Rev. J. D. la Touche, instituted the publication of its "Record of Bare Facts." Two years later the Caradoc Field Club was amalgamated with the Severn Valley Field Club and Cobbold was Hon. Secretary from 1893-5. The united Club has published the "Record of Bare Facts" and "Transactions" from that date to the present.

The first piece of local work recorded by Cobbold, published in 1892, was the investigation of the patch of Silurian rock faulted in to the west of Caer Caradoc. From this he got fossils that gave the exact age and sequence of the rocks. Later excavations for sewers in Church Stretton itself proved the extension of the same rocks, and justified the theory he had formed that the valley between the Longmynd and Caradoc ranges was a "rift" valley floored with Silurian rocks let down through faults.

For some years after this Cobbold was interested in the Ordovician rocks and their fossils, and also in the rocks of Longmynd itself. It was the latter which brought the writer into closer contact with him.

His collections of rocks needed slicing and microscopic description, and one outcome of the joint work was the confirmation of his discovery that the Batch Series was volcanic in origin.

The views that Cobbold came to hold as to the age and relations of the Longmyndian rocks were by no means in agreement with those held by other workers; but the work of Dr. Whittard and himself on the Helmeth Grits of Ragleth and to the north of it established that they represented the "decadent phases of the vulcanity of the Uriconian," and that they formed the base of the Eastern Longmyndian rocks, coming below the Watling Shales. This made a new and very valuable contribution to knowledge of the very difficult problems presented by the most ancient rocks of the Church Stretton district.

Cobbold also took interest in the glacial phenomenon of this area, collecting the far travelled boulders from the Lake District and Wales, which mark the invasion of the ice-sheet of the Glacial Epoch into the Shropshire hills. From the evidence he collected he was able to give an explanation of the Marshbrook gorge, and the curious severed spurs of the Longmynd, in the erosion effected by water escaping from the front or margin of the ice , or from lakes dammed up by it.

Cobbold had, however, not yet come to what was to be the chief geological work of his life, the exploration of the Cambrian rocks of the Wrekin and Caradoc areas, and of the organisms preserved as fossils in them, almost the oldest traces of life in the world.

The "heroic age" of Shropshire geology may be said to have closed with the publication of the maps of the Geological Survey, mostly about 1850, but with modifications and revisions up to 1855 or even 1858. The names of the Surveyors engaged have become famous, such as Aveline, Selwyn, Jukes, and Ramsay, and their work took cognisance of that of many other geologists, of whom there is only space to mention Aikin, Conybeare, Murchison, Sedgwick, Prestwich, Morton and Yates, and a number of local workers like Egerton, Harley, Blunt, Lightbody, Marston, and Scott. No Survey Memoir on Shropshire was published so that many of even the Surveyors observations are lost. Thus the maps provided a point of departure, and a new era of research was ushered in by such men as La Touche, Maw, Allport, Bonney, Hicks, and Blake, with Randall, Wyatt-Edgell, Davies, Symonds, and D. Jones.

From the point of view of Cobbold's work we may regard the initiator as Callaway, who, in 1874, corrected the wrong identification of the Shales of Shineton, and in 1877 finally proved his case that these shales are of Upper Cambrian (Tremadoc) age. He then went on to show that they were underlain by the Hollybush (Comley) Sandstones and the Wrekin Quartzite, but he did not obtain sufficient evidence to date these correctly. However, he drew the right inference that the rocks underneath the last must be pre-Cambrian, and he thought, but had no certain proof, that the Longmynd rocks must also be pre-Cambrian.

The requisite evidence on these points was supplied by Charles Lapworth. In a limestone band in the Comley Sandstone he obtained trilobite fragments, and, after accumulating them for many years, he had enough by 1888 to convince him that they were bits of *Olenellus*, a form which that year was acknowledged by American Geologists at the International Congress to characterise the lowest Cambrian of their country, thus confirming the conclusion already reached in Scandinavia and Russia. In 1891 Lapworth was able to restore and describe this as a new species of *Olenellus (Callavia) callavei*, and in the same publication to announce the discovery by Groom of the genus *Paradoxides* in somewhat higher beds of the sandstone at Comley. Thus it was proved that the Lower and Middle, as well as the Upper Cambrian rocks, were all present in this region in Shropshire, leaving no room in the sequence for the Longmyndian which, as well as the Uriconian volcanic rocks of the Caradoc and the Wrekin, must be pre-Cambrian and not Cambrian as hitherto supposed.

Cobbold was, from at least 1890 onwards, a frequent companion of Lapworth and his students and friends in their study of Salopian geology generally, and especially in their hunts for *Olenellus* and its congeners. Contact with the genius and enthusiasm of the great geologist struck fire in the kindred spirit; a new direction and a fresh impulse was given by this deciding factor. Seeing and studying Lapworth's methods in the field, and realising the importance to science of a full and detailed knowledge of these ancient rocks, Cobbold resolved to devote himself, for the rest of his life if need be and as it turned out, to the elucidation of the Lower and Middles Cambrian of Shropshire.

We find the first record of his Comley collections in "Bare Facts" in 1901, and, though this is unlikely to be the beginning of his work there, it gives a useful date. The fossils in the Comley limestones are very much broken up and the rock itself is extremely tough and intractable. Successful collecting in such conditions needed a man on the spot, with a fair amount of leisure, and with indomitable perseverance and industry, as well as a good eye and skilled hands. Such a man was Cobbold and it is fortunate for science that the occasion and the man coincided.

It has to be remembered that collection is only the beginning of troubles. An infinity of time must be given to developing specimens and bringing out their characters by skilful use of chisel and needle, and with a dental mallet. Such work must often be done under a magnifying glass and it calls for astonishing patience and perseverance. The fossils must then be studied, compared with other specimens and with figures and descriptions from similar rocks all over the world, before they can be correctly determined. And then, if new, or showing new features, they must be described. Fortunately Cobbold was also well equipped with the qualities required for this side of his work. He had a good knowledge of languages to deal with the literature of his subject; he was a good photographer; and above all, he was an artist with pencil and brush. His papers are all illustrated with his own elaborate and accurate drawings generally founded for the sake of precision in photographs. Although such work was a great strain on his eyesight it is noteworthy that he was able to continue it till his last year; and by the irony of fate, it was the most minute of organisms that were reserved till last. His engineering training shows itself in the measurement and drafting of the sections and maps which illustrate many of his papers.

After working on natural exposures, quarries, crags, brook-banks and the like for half a dozen years, Cobbold got to know the run of his rocks so well that he could indicate their position under ground, and could find the spots most likely to yield to excavation new and instructive material. Small grants were made for six or seven years by the British Association, and these were carefully expended, stretched and added to by Cobbold himself, for that purpose, until not only was much new material available but some remarkable fresh problems were revealed and solved.

Cobbold went far beyond all previous observers in his careful collecting from small bands of rock often only an inch or two thick, so that he was not only able to make quite certain that the Lower and Middle Cambrian rocks contained entirely different suites of fossils, characterised by *Olenellus* and *Paradoxides* respectively, but to divide both of them into a number of successive small divisions or zones, each marked and recognisable by a definite assemblage of organisms. Several of these sub-divisions could be correlated with corresponding ones elsewhere, say in Europe or America, and in the Lower Cambrian of the Protolenus fauna, which had been previously discovered and described, but not exactly placed, in America.

But the excavations in one place seemed to contradict the definite separation of the Lower and Middle faunas, just mentioned, in that in one band *Paradoxides* and *Olenellus* occurred mixed up together. This contradiction of established results naturally presented a most serious problem, but it was tackled by Cobbold with his usual vigour and acumen, and solved with his usual success. He found that, while the specimens of *Paradoxides* were indigenous to this band, those of *Olenellus* were strangers, derived from elsewhere and washed in while in the actual state of fossils. In other words, the sea of Middle Cambrian time in which swam live *Paradoxides* was bounded by a rocky shore of Lower Cambrian rock containing *Olenellus* as fossils. This rock was broken up by waves and weather and bits of it containing fossils, or even smashed bits of fossils themselves, were made into rough pebbles, and these became embedded in the mud of the seabed side by side with the bodies of the *Paradoxides* which had just been living in the water. It was as though an archaeologist digging out Roman coins were to drop among them a few coppers out of his own pocket. Thus the great principle of the identification of rocks by fossils, on which are built the widest generalisations of geology, was triumphantly vindicated; and Cobbold's eyes were opened to the fact that Cambrian time was recorded not only by the presence but by the absence of strata; that is by gaps in the succession as well as by the rocks themselves. Considerable changes in the level of sea and land must have been occurring at this time involving great movements of the earth's crust within the Period. Thus the Period must have been much longer that previously suspected.

The results of his thirty-five years' work on the Cambrian rocks were communicated to various Societies in a series of papers of which a list is given in the appendix. He was able to divide the Lower Cambrian at Comley into eleven divisions, mostly zones with characteristic faunas, and the Middle

Cambrian into nine. He also demonstrated the existence of the lower part of the Upper Cambrian, which had been supposed not to exist in the county. In the course of this work he described a dozen new genera and over a hundred new species of fossils. If it be true, as was said in another connexion, that "he who calls, what has vanished back again into being enjoys a bliss like that of creating," surely Cobbold has enjoyed an exceptional share of such bliss. And it must be remembered that those were additions to the meagre census of one of the earliest populations of the world, the Cambrian fauna; and that the only evidence of such a population at all, when Cobbold was ten years old, was a few miserable shell fragments.

When the Geological Survey, in revising the maps of Shropshire, found that new evidence was available in the Cambrian area, which had been indicated by Callaway, near Rushton, Dr. Cobbold was called in to help in the collection and determination of the fossils from such natural exposures that existed and from excavations made for the purpose. As a result of the joint work a detailed map, showing the distribution of Lower, Middle and Upper Cambrian between the Uriconian masses of the Wrekin and Charlton Hill, became possible, and a paper, beautifully illustrated, was published, in conjunction with Dr. Pocock, in the Philosophical Transactions of the Royal Society. In this many new species were described, the zoning of the rocks was effected, and a large and invaluable table was drawn up to show the correlation of the Cambrian rocks all over the world.

The type specimens on which his descriptions were founded have been for the most part deposited for permanent preservation in one or other of the great geological museums of the country; some in the British Museum (Natural History), some in the Sedgewick Museum at Cambridge, and those from the Rushton area in the Museum of the Geological Survey at Kensington. With his duplicates he was most generous; they are to be found in local museums, such as Shrewsbury, which has his Ordovician specimens, or in teaching collections of Universities or Colleges, where they will help to "spread the light."

The reputation which Dr. Cobbold had acquired for his knowledge of Cambrian fossils and of rocks of the Church Stretton neighbourhood made his home a house of call for geologists from all parts of the world, and for students from all over the Kingdom. To these he gave most freely of his time and energy, and of his unrivalled knowledge. He would show them his collections, take them into the field to his pet localities, and determine their finds for them. He was equally generous and helpful to field parties from Universities and from local or larger Naturalist Societies. Foreign and home experts also entrusted him with their material for his, or more generally their own advantage, and work upon it was ungrudgingly given. He travelled in Bohemia, Poland, Scandinavia and France, in order to increase his experience and to compare his own area with those described abroad; and from some localities, as in France particularly, he wrote papers, published at home or elsewhere, on species of novelty or interest. One of his latest pieces of work was the examination of trilobites from very ancient rocks in Western Australia.

As an acknowledgement of the generous way in which landlords and tenants allowed him to wander upon their ground, or to carry out his excavations, he was most anxious to secure that such privileges should not be abused. And he put all his authority and influence into an appeal to field parties to exercise the greatest care and consideration to avoid the possibility of cattle straying or other forms of damage.

Cobbold's interests extended into many directions besides geology. He was an admirable botanist, with a wide knowledge of plants, both local and general. His garden at Watling House was a joy to himself and his friends, and was famous for its beauty and attractiveness. Those who saw it when the crocuses made a sheet of colour under the trees, or when he filled it with his wife's favourite blue flowers, or when his royal ferns, or echeverias, or dieramas, were in full glory, are not likely to forget it. But he had a deeper interest in its rarities which had been brought together by himself in his travels or by exchange with like-minded friends, and cultivated till they flourished as though they knew he was their friend.

Again he was deeply interested in Archaeology, being especially concerted with pre-Roman and Saxon antiquities, and there was little that he did not know about the camps, roads, buildings, implements and other relics; as he showed in the third volume which he wrote after he had published the part on geology in the first part of "Church Stretton." This work, and that on "Church Stretton Illustrated," which was first published in 1902 and passed through many editions, often improved and added to,

the later ones containing his geological maps of the district, are examples of his concern for his home are for which he was always thinking and working. Knowing the county so thoroughly and having traversed it again and again on foot, his knowledge of footpaths was "extensive and peculiar." He was able to lay them and the common lands down on large scale maps, and he always endeavoured to keep them permanently open. In many other ways his energy was placed at the disposal of his town, his church, and his friends and neighbours.

His wife, whom he married in 1873, was for many years an invalid, but they travelled together in the Alps, in Italy, and especially in the Black Forest, to which they were much attached. Her death in 1925, after half a century of happy married life, was a great blow, from which he recovered but slowly. An illness and operation followed, but fortunately he regained his health sufficiently to work and walk with his old vigour. No less that seven papers were put out in 1934 and the following year. He was able to do a certain amount of field-work up to that time. On his 80th birthday he was out with the London Geologists' Association, and in 1933 he actually took part in leading an expedition into the county organised by the British Association. In his house he was working on his collected material to within a week of his death; and, though his eyesight weakened to some extent towards the end, he never ceased to develop, draw, study, and describe his beloved fossils. He was fortunately spared a long illness, but suffered a good deal of pain just before the end. He was buried at Church Stretton on November 23, 1936, a large body of friends and a number of representative scientific men attending the funeral.

Cobbold was an Associate-Member of the Institution of Civil Engineers, and one of the oldest living Fellows of the Geological Society, having been elected in 1879 on the proposition of Etheridge, Prestwich, Ramsay and Bannerman. The Owens College could not confer degrees when he was a student there, a deficiency made good as already stated on the Jubilee of the University. The Geological Society recognised his earlier work by a grant from its Murchison Fund in 1911, on the award of which the President said; "It is appropriate that the Murchison Fund should pass into "Siluria" and to one working on the Older Palaeozoic Rocks, as a token of the good will of your fellow-workers, a mark of their pleasure in your achievements, and an expression of their confidence in your future work." The justification of his anticipation was marked ten years afterwards by the same Society in the award of the Murchison Medal, "in recognition of his services in advancing geological science." The president added, "he has …. established the Cambrian strata of Shropshire as the type sequence for the Cambrian faunas of the country," he "has shown that valuable work can still be carried on by one who is not, professionally, the holder of a geological appointment. His example will, I hope, encourage others to do likewise with equal success." Cobbold was, indeed, a typical "amateur" geologist, belonging to a type of which Shropshire has produced so many, some of them already mentioned; men who used their means and time to advance the science, out of their pure interest and love for it.

But one's mind keeps going back to the pleasant talks in his study, illustrated where needful with his books or maps or specimens, emphasised from time to time with his pipe stem or ready pencil; to the drives with him to or from the field in the west or south of the county; and to the long walks over the Longmynd, the Cwms and Comley, or to Hopesay or the Wrekin, when, even though he was long past middle age, his stride was not easy to keep pace with; while all the time he poured out the treasures of his well-stored memory, or argued a point on which he had long been accumulating evidence.

This notice would be incomplete without reference to Cobbold's genius for friendship. Hosts of us, friends and students from home or overseas or abroad, received from him ungrudging help and kindness, his hospitality at home and in the field, and the delight of his guidance and companionship over the region he knew and loved so well. To us all he was ever the wisest of counsellors, and the most thoughtful and considerate of friends.

In preparing this notice I am indebted to an article in the "Shrewsbury Chronicle," to the help of Dr. Cobbold's sister, Miss Fanny M. Cobbold, and to that of many of his friends, particularly Dr. Whittard, Prof. Pugh and Mr Wilding. The photograph appended was taken by Dr. C. E. Resser, the American geologist.

Appendix 2: Edgar Sterling Cobbold Fossils at the Ludlow Museum Resource Centre

Cobbold's fossils are recorded as having been donated in March 1896 and September 1923 (Roden 1991). To date only four fossils from the Cobbold collection have been entered into the National History Museum Portal:

A. Cobbold Fossils on the Natural History Museum Portal

Priref 65738
Ordovician Brachiopod
Heterorthis patera
Harnage Grange Quarry
shyms g. 1994.0305

Priref 657390
Ordovician Brachiopod
Heterorthis patera
Harnage Grange Quarry
shyms g. 1994.0306

Priref 657817
Trilobite/Brachiopod
Resserlella paracyclica/Calymene sp.
Gretton
shyms g. 1994.0393

Priref 657392
Brachiopod
Resserlella paracyclica
Gretton
shyms g. 1994.0395

B. Cobbold Fossils held at the Ludlow Museum Resource Centre

The listing below was obtained by examination of the shelves holding Cobbold fossils as indicated in the initial review of the contents of the Hanson store at the Ludlow Museum Resource Centre. The basic information included was taken from the Inventory made when the fossils were transferred from Shrewsbury to Ludlow. Some 300 plus fossils are listed. As with other listings of Shrewsbury fossils, an alternative listing could have been made using the Adlib based shyms: G.1997/xxxx numbers – here the GG number list would seem to be the more complete.

– a final listing will be made when the current (2018) task of entering the Hanson store contents into Adlib has been completed.

Inventory No.		***Species***	***Location***
GG.			
13.120-126	Br.	Trematis punctata (Sow.)	Folly Bank, Enchmarsh
14.007	Br.	Cliftonia speriferoides (McCoy)	Hannigan Field, Hazler Hill
14.014-15	Br.	Reserella paracyclica (Bancroft)	Gretton
14.016-17	Br.	Trematis punctata (Sow.)	Onny River nr New House
14.020	Br.	Micromita labradorica (Billings)	Comley
14.021	Br.	Micromita phillipsi (Holl.)	Comley
14.022-25	Br.	Lingulella viridis (Cobbold)	Comley
14.026-27	Br.	Lingulella nicholsoni (Callaway)	Shineton Brook
14.048	Br.	Lingula ovata (McCoy)	The Cwms
14.103-104	Br.	Linguella nicholsoni (Callaway)	Shineton Brook
15.002-03	Br.	Rafinesquina expansa (Sow.)	Soudley Quarry
15.004-07	Br.	Rafinesquina sp.	Black Dick's Quarry
15.008	Br.	Acrothyra cf. Sera (Matthews)	Comley
15.015-19	Br.	Onniella cf Broeggeri (Bancroft)	Horderley
15.020	Br.	Harknesella subquadrata (Bancroft)	Black Dick's Coppice
15.024-26	Br.	Dinorthis flabellulum (Sow.)	Horderley
15.027-28	Biv.	Ctenodonta varicosa (Salter)	River Onny
15.057-59	Br.	Heterorthis alternata (Sow.)	Marshbrook Station
15.060	Br.	Heterorthis alternata (Sow.)	Folly Bank, Enchmarsh
15.062-63	Br.	Heterorthis alternata (Sow.)	Folly Bank, Enchmarsh
15.064-65	Br.	Heterorthis alternata (Sow.)	Onny River
15.070-72	Br.	Billingsella lindstroemi (Linnarsson)	Comley
16.057-58	Biv.	Ctenodonta sp.	Horderley-Strefford Bridge
16.088-91	Br.	Acrotreta sabrinae (Callaway)	Shineton Brook
16.146-147	Br.	Wattsella wattsi (Bancroft)	Marshbrook
16.148-149	Br.	Heterorthis patera (Salter)	Harnage Grange
17.053	Br.	Crania sp. indef.	The Cwms
17.093	Br.	Reuschella horderleyensis (Bancroft)	Chatwall
17.095-97	Br.	Orthis aff. Calligrama (Dalman)	The Cwms
17.098	Br.	Orthis (Linoporella?) aff. Salteri (Davidson)	Hazler Hill
17.122	Gast.	Platystropha sp. nov.	Horderley Quarry
17.123-124	Gast.	Platystropha cf biforata (Schlotheim)	?
17.144	Br.	Reuschella bilobata (Sow.)	Gretton
17.146-147	Br.	Resserella aff. Canalis (Sow.)	Folly Bank, Enchmarsh
17.150	Br.	Reserella paracyclica (Bancroft)	River Onny
17.151-153	Br.	Crania sp. indef.	The Cwms, Old Quarry
17.154	Br.	Sowerbyella sericea (Sow.)	Horderley

17.161	Br.	Sowerbyella sericea (Sow.) var. Soudleyensis	Hoar Edge
17.165	Br.	Rafesquina sp.	The Cwms
24.024	Crinoid	Glyptocrinus basalis (McCoy)	Horderley
24.025	Crinoid	Glyptocrinus basalis (McCoy)	Chatwall
24.031-32	Crinoid	Macrosystella mariae (Call.)	Shineton Brook
24.042	Crinoid	Macrosystella sp.	?
26.001	Gast.	Bellerophon sp.	Shineton Brook
26.003	Gast.	Bellepheron sp.	Coalbrookdale
26.018	Gast.	Sinuites sp.	Bausley Hill Farm, Brieden Hills
26.019	Gast.	Sinuites pseudo compressus (Reed)	Horderley- Strefford Bridge Rd
26.020	Gast.	Sinuites pseudo compressus (Reed)	W. Onny Street
26.021	Gast.	Sinuites pseudo compressus (Reed)	The Cwms, Church Stretton
26.022	Gast.	Sinuites cf bilobatus (Sow.)	W. Onny River
26.023	Gast.	Sinuites cf bilobatus (Sow.)	Horderley,-Strefford Bridge Rd
28.002	Biv.	Orthonota nasuta (Conrad)	The Cwms
28.014	Biv.	Orthonota sp.	Onny River
28.017	Br.	Acrotreta cf. Sabrina	Shineton Brook
28.020-21	Biv.	Gospira cf aequalis (Salter)	Harnage Grange
28.023	Biv.	Modiolopsis expansa (Portlock)	Harnage Grange
28.029	Biv.	Ctenodontea sp. (Anglia d'orb)	Cound Moor
28.030	Biv.	Modiolopis orbicularis (Sow.)	Onny River
28.037	Biv.	Modiolopsis expansa (Portlock)	Black Dick's Coppice
28.038	Biv.	Modiolopsis modiolaris (Conrad)	Onny River
28.039	Biv.	Ctenodonta varicosa (Salter)	Harnage Grange
30.069-70	Biv.	Orthonota rigida (Sow.)	All Stretton
38.008-10	Hyolith	Hyolithus cf lenticularis (Holm.)	Comley
38.011-13	Hyolith	Hyolithus strettonensis (Cobbold)	Comley
38.014-18	Hyolith	Hyolithus reversus (Salter)	Harnage Grange
38.019-20	Hyolith	Hyolithellus micans (Billings)	Comley
38.025-26	Br.	Misc. gen. et. sp. indeterminate	Comley
38.027	Polych.	Lapworthella fragment	Comley
38.031-32	Tr.	Weymouthia nobilis (Ford)	Comley
38.037	Br.	Pholidrops umbonata	Upper Harnage
38.038-39	Br.	Pholidrops umbonata	Onny River
38.042	Tr.	Bradoria sp.	Robin's Tump
38.044	Tr.	Aluta sp.	Comley
38.047-48	Hyolith	Hyolithus sp.	Harnage Grange
38.049	Hyolith	Hyolithus bayonet (Matthew)	Comley
38.051	Hyolith	Hyolithus crassus (Specon)	Comley
		Cobbold 1920 Pl. XXXIV Fig. 21	
38.052-53	Hyolith	Hyolithus operculum	Comley
38.054	Hyolith	Hyolithus cf degeeri (Holm)	Comley
38.055-57	Hyolith	Hyolithus magnificus (S & B)	Shineton Brook
38.058-60	Hyolith	Hyolithus sculptilis (Cobbold)	Comley
38.061-62	Hyolith	Hyolithus Strettonensis (Cobbold)	Comley
38.063	Hyolith	Hyolithus jonstruppi (Holm)	Comley
38.064	Hyolith	Hyolithus sp.	Comley
38.066	Hyolith	Hyolithus bayonet (Matthew)	Comley
38.067	Hyolith	Hyolithus aft. Aratus	Comley
38.071-72	Tr.	Dorypyge lakei var. reticulata (Cobbold)	Dairy Hill Lane
39.010-11	Ost.	Tetradella complicata (Salter)	Soudley Quarry
39.021	Polyzoa	Sponges & worms	?
39.033	Polyzoa	Sponges & worms	Horderley Quarry

39.034-35	Polyzoa	Sponges & worms	Harnage Grange
39.045-46	Protospongia	Sponges & worms	Shineton Brook
39.047	Polyzoa	Sponges & worms	R. Onny
39.048	Sponge	Sphaerospongia hospitalis (Salter)	Cheney Longville
40.037	Gr.	Orthograptus spinsus (Wood)	?
40.040-41	Gr.	Monograptus chimaera	?
41.008-9	Gr.	Climacograptus antiquus (Lap.)	Habberley Brook, Pontesford
41.024	Gr.	Climacograptus antiquus (Lap.)	Botany Bay, Pontesford
42.007-15	Tr.	Reacalymene pusulosa (Shirley)	Harnage Grange Quarry
42.016-18	Tr.	Cryptolithus sp. Botany Bay,	Pontesford
42.030-32	Tr.	Paradoxides cf Intermedius	Dairy Hill Lane
42.033	Tr.	Holmia	Robins Tump
42.035-37	Tr.	Dorypyge lakei (Cobbold) *Cobbold 1911 p. 287 Pl. XXV Fig. 1*	Comley
42.041-42	Tr.	Strenuella plancephala (Cobbold)	Comley
42.048	Tr.	Protolenus (fragment)	Comley
42.049	Tr.	Paradoxides	-
42.050	Tr.	Strenuella pustulata (Cobbold) *Cobbold 1910 p. 40 Pl. VI Fig.1*	Comley
42.051-54	Br.	Obolus parvulus (Cobbold)	Comley
42.057-58	Tr.	Protolenus latouchei (Cobbold)	Comley
47.004-07	Tr.	Reuscholithus sp.	Broseley Hill, Breidden |Hills
47.010	Tr.	Brongniartella bisulcatus (Salter)	Onny River
47.011	Tr.	Brongniartella bisulcatus (Salter)	Acton Scott
47.012	Tr.	Brongniartella bisulcatus (Salter)	Horderley
47.013	Tr.	Brongniartella bisulcatus (Salter)	Folly Bank nr Enchmarsh
47.024-29	Tr.	Reacalymene pusulosa (Shirley)	Harnage Grange Quarry
47.050	Tr.	Homalonotus bohemicus (Salter)	Black Dicks Quarry, Evenwood
47.055	Tr.	Salterolithus harnagensis (Bancroft)	Hazler Hill
47.057	Tr.	Brongniartella bisulcatus (Salter)	Black Dicks Quarry, Evenwood
47.062	Tr.	Cryptolithus broeggeri (Bancroft)	River Onny, Horderley
47.069	Tr.	Leonaspis coronata (Sil.)	?
48.001-03	Tr.	Agnostus dix (Callaway)	Shineton Brook
48.004-8	Tr.	Asaphellus homfrayi (Salter)	Shineton Brook
48.012-17	Tr.	Eodiscus lobatus	Comley
48.018	Tr.	Euloma monile (Salter)	Shineton Brook
48.036-37	Tr.	Asaphellus homfrayi (Salter)	Shineton Brook
48.041-42	Tr.	Asaphellus homfrayi (Salter)	Shineton Brook
48.043	Tr.	Eodiscus belli-marginatus (Shaler)	Comley
48.049	Tr.	Protolenus latouchei (Cobbold)	Comley
48.053-54	Tr.	Asaphellus homfrayi (Salter)	Shineton Brook
48.066-69	?	Sympsurus crofti	Shineton Brook
48.078-79	?	?	?
49.001-05	Tr.	Dalmanites nexillus	?
49.025	Br.	Brongniartella sp. Pholidops?	Horderley
49.030	Tr.	cf Reuscholithus reuschi (Ban.)	Cwm, Ch. Stretton
49.031-34	Tr.	Mohicana lata (Cobbold) (Ellipsocephalus) *Cobbold 1910 p. 45 Pl. VI Fig. 4*	Comley
49.037	Tr.	Ampyx cf parvulus (Forbes)	?
49.044	Tr.	Leonaspis coronata (Salter)	?
49.046	Tr.	Lichas laxatus	Onny River
49.047-49	Br.	Obolella atlantica v. comleyensis (Cobbold)	Comley
49.052-53	Tr.	Pagetia attleborensis (Shaler & Foerste) *Cobbold/Pocock 1934*	Comley

49.057-58	Tr.	Protolenus cf latouchei (Cobbold) *Cobbold 1910 p. 42 Pl. XII Figs 2.5*	Comley
49.059-62	Tr.	Strettonia comleyensis (Cobbold) *Cobbold 1931, 1934 p. 413 Pl. XI fig.5*	Comley
49.063	Polych.	Lapworthella nigra (Cobbold)	Comley
49.066	Tr.	Protolenus morpheus (Cobbold) *Cobbold 1910 p. 44 Pl. VIII Fig. 7*	Comley
50.001-05	?	Acaste apiculata (Salter)	Soudley Quarry
50.011	Tr.	Cryptolithus soudleyensis (Bancroft)	Soudley Quarry
50.014	Br.	Obolella ? groomi (Malley)	Little Caradoc
50.015-16	Tr.	Cryptolithus broeggeri (Bancroft)	River Onny, Horderley
50.020-21	Tr.	Marrolithus aff. flavus (Salter)	Harnage New (1902) Quarry
50.027-30	Br.	Onniella cf avelini (Bancroft)	Harnage New (1902) Quarry
50.031	Tr.	Synhomalonotus parvifrons (Salter)	Mytton Beach, Shelve
50.039	Tr.	Asaphus powisi (Murchison)	The Cwms, Church Stretton
50.040-41	Tr.	Asaphus powisi (Murchison)	Botany Bay, Pontesford
50.043	Tr.	Homalonotus cf Bohemicus (Barr)	Harnage Grange Quarry
50.045	Br.	Salopiella oblique (Cobbold)	Comley
50.051-57	Tr.	Asaphus powisi (Murchison)	The Cwms, Church Stretton
56.031-34	Ost.	Primitia bicornis (Jones)	The Cwms, Church Stretton
56.036-43	Ost.	Tetradella complicata (Salter)	Hazler Hill
56.044-45	Ost.	Tetradella complicata (Salter)	The Cwms, Church Stretton