A Short History of the Dudley & Midland Geological Societies

A Cutler

Summary

The history and development of the Dudley Geological Societies is traced with the aid of published transactions and other manuscript material. Both Societies established geological museums in Dudley, the surviving collections of which are now in the care of the Local Authority.

Introduction

It is not common knowledge that a geological society existed in the Black Country during the nineteenth century and probably even less so that there were two societies at different periods, which shared similar titles. That these societies existed at all should come as no surprise. The nineteenth century was a period of great scientific advancement and popular interest in all sciences was high. The period too was one of great industrial activity particularly in the Black Country and geological problems of a very practical nature relating to mining served to make the societies ideal forums for all interested parties. They were both typical nineteenth century scientific societies and possessed many essentially amateur members. But their contribution to Black Country geology was certainly not amateur and has proved to be of lasting value.

The Original Society

The original or first society (even referred to as the parent society in later references) was formed in 1841 and quickly attracted a most impressive total of 150 subscribing members. Lord Ward accepted the office of President and some thirty local industrialists, geologists and Members of Parliament became Vice-Presidents. The list of patrons included no less than thirteen peers of the realm, three Lord Bishops and Sir Robert Peel who is perhaps more well known for his association with the first constabularies. (see Fig. 1). A provisional committee was appointed at an early stage to draw up the format for the society and it certainly appears to have carried out all the necessary ground work by the time of the first general meeting which was held on Monday 17th January 1842. The meeting was held at the Free Grammar School, Dudley, and the society adopted the title Dudley and Midland Geological Society. It must have been a particularly auspicious occasion for not only were there several titled persons present but many eminent geologists of the day, the most notable being Murchison himself.

Roderick Impey Murchison was already a legend in his own lifetime; a Fellow of the Royal Society and President of the Geological Society of London. He came to Dudley specially for the meeting and delivered the Inaugural Address. Murchison was of course not unfamiliar with the area for he had published papers on Silurian rocks in the Black Country even before the classic "Silurian System" was published in 1839 which of course included detailed references to the Silurian rocks of Dudley and Lye.
The fact that Murchison was associated with the Society serves to illustrate the obvious importance and high regard with which the Society was held. He was understandably made an Honorary Member along with his other famous contemporaries Professors Buckland and Sedgewick. Rules passed at that first meeting called for Society general meetings once a quarter on the second Tuesday in February, May, August and November. The committee was to meet once a month. The annual subscription was fixed at one guinea per annum, which was no mean sum in those days, yet it did not prevent a healthy membership as we have seen.

We learn from Murchison's address that the initial impetus for the establishment of the Society was derived from the visit to Birmingham by the British Association for the Advancement of Science in 1839. The annual meetings of the British Association were notable parts of the academic and even social calendar and several large private collections of fossils derived from Castle Hill, Wrens Nest and the Coal Measures were put on display. Many hitherto unknown species came to light as a result and it was decided to try and keep these collections together and form a permanent museum.

In fact the establishment of a museum appears to have been the principal aim of the Society. As might be expected, obtaining suitable premises was the biggest problem although this was quite quickly solved by the generous offer by Mr. Jos. Bennitt of premises known as the Britannia Inn situated near the centre of Dudley. The exact location of this site is not firmly established but, the necessary structural alterations and fittings were approved and eventually it became the very prestigious museum and Society rooms.

The museum was open to the public every day between 10.0 a.m. and 4.0 p.m. except Sundays, Fridays and Christmas Day. The museum must have held perhaps one of the finest collections of Silurian Fossils for they boasted sixteen species of Trilobites and also specimens of the fossil fish Meglichthys Hibberti which had been discovered in iron-stone nodules in the coal measures.

Finance does not seem to have been very much of a problem, initially at least. The patrons were extremely helpful; Lord Ward had donated 50 guineas, the Earl of Dartmouth 40 guineas and many other people gave generously so much so that by the first meeting income was already over £553 of which £431.5.0d. had been derived as donations the remainder being subscriptions.

The strength of the Society is further demonstrated by the establishment of a Wolverhampton Branch which held its first general meeting on Friday, 11th February 1842. Henry Hill a noted geologist and a Vice-President of the parent society was elected President. Subscription to the branch was fixed at five shillings per annum with a concession to ladies in that they could become members without having to join the parent society! The Wolverhampton branch was also fortunate in securing a noted speaker for its first meeting. Following the general formalities the Inaugural Address was delivered by J. Beete Jukes. Jukes was later to enjoy a not inconsiderable reputation as an academic and in the late 1850's was appointed the local director of The Irish Geological Survey. He was of course the author of two editions of the Geological Survey Memoirs published in 1855 and 1859 relating to the South Staffordshire Coalfield. Both memoirs include many references to the individuals who were members of the Society and had supplied him with geological information about the area.
### Patrons

- **His Grace the Duke of Sutherland**
- **Francis Downing**, Esq., The Priory
- **His Grace The Duke of Cleveland**
- **The Right Honourable the Earl of Dartmouth**
- **The Right Honourable the Earl of Talbot**
- **The Right Honourable the Earl of Harrowby**
- **The Right Honourable the Earl of Mountnorris**
- **The Right Honourable Sir Robert Peel, Bart.**
- **Viscount Sandon, M.P.**
- **Viscount Ingestre, M.P.**
- **Lord Ward**
- **Lord Newport**
- **The Right Honourable Sir Robert Peel, Bart.**
- **Lord Littellon**
- **Lord Wrottesley**
- **The Right Reverend the Lord Bishop of Exeter**
- **The Right Reverend the Lord Bishop of Lichfield**
- **The Right Reverend the Lord Bishop of Worcester**
- ** Reverend Professor Ricardo, D.D., F.R.S., F.G.S.**

### Honorary Members

- **Mr. H. M. Wainwright**
- **Mr. S. D. Fereday**

### President

- **Lord Ward**

### Vice-Presidents

- **William Anstice**, Esq., F.G.S., Madeley Wood
- **Thomas Badger**, Esq., Dudley
- **John Badley**, Esq., Dudley
- **John Barker**, Esq., Wolverhampton
- **William Bennett**, Esq., Dudley
- **Benjamin Best**, Esq., Congreave
- **John Blackwell**, Esq., Stourbridge
- **Heraiah Botfield**, Esq., M.P., F.R.S., Ludlow
- **Cornelius Cartwright**, Esq., Dudley
- **Rev. T. L. Claughton**, Kidderminster
- **Thomas Davies**, Esq., The Austins
- **Edward Dixon**, Esq., Ashwood

### Treasurer

- **George Dalton**, Esq.

### Honorary Secretaries

- **Mr. H. M. Wainwright**
- **Mr. S. D. Fereday**

### Honorary Curators

- **Mr. Charles Twamley**
- **Mr. John Gray**

### Committee

- **Mr. H. Beckett**, Wolverhampton
- **Mr. J. O. Bretell**, Dudley
- **Mr. Samuel Dalton**, Dudley
- **Mr. T. W. Fletcher**, Dudley
- **Mr. Hamilton**, Wolverhampton
- **Mr. John Marsi**, Dudley
- **Mr. James Morris**, Dudley
- **Mr. Parke**, Wolverhampton
- **Mr. W. Richardson**, Dudley
- **Mr. E. F. Smith**, Dudley
- **Mr. Edward Williams**, Dudley
- **Mr. Thomas Wright**, Dudley
It was arranged that the meetings of the Wolverhampton branch should be held every month at the Assembly rooms in Queen's Street, Wolverhampton. So the next gathering was on Friday, March 4th, when Henry Hill gave a lecture on the "Science of Geology".

The parent society held its first quarterly meeting at the Society's rooms on Tuesday, 7th June 1842, at 12.00 noon precisely, to hear a lecture regarding the igneous rocks to be found in the South Staffordshire Coalfield. A "cold collation" for which tickets were 2/6d. was served afterwards at the Dudley Arms at 1.30 p.m. After lunch a party visited the Rowley Hills to inspect the quarrying operations.

Regretably, apart from a note that the 1st Annual General Meeting was to be held in May 1843 no further record of the Society's activities have been unearthed in the course of this short investigation. Exactly how long the Society flourished is difficult to tell. Professor Beckett in his Address to the second Society in 1862 stated "It may be considered proper to make a passing allusion to a former Dudley & Midland Geological Society, which about twenty years ago was established in this district under the brightest auspices. For a while that Society assumed a promising and important position, but like an evanescent meteor, it suddenly and unaccountably disappeared from the world of science, bequeathing bright memories to a few individuals, but alas! painful retrospects and warnings to the multitude". What the painful retrospects and warnings were we can only speculate but he goes on "It would be futile to enquire into the causes which led to the untimely end of our parent society (the reference noted earlier - Author), but be it not forgotten that during its brief career some of the members were not altogether idle. To those who remember the unrivalled treasures of the old museum so rich, especially in Silurian spolia I need not speak of the unwearied zeal displayed in its collection. The fame of that noble museum extented wherever Geology was held in repute, but other valuable aids to science originated with the Society which although less generally known, are nevertheless deserving of record. I allude to the field labour of some of the members so honourably acknowledged in the memoirs of the Geological Survey".

The address continued and, quite obviously the Society was held in high regard but the impression gained is that the Society was active only for a short period.

However, in 1875 in a review of the progress of the second Society the following statement appears "This Society was established in 1862, under its present name but for twenty years previously there had been a somewhat similar one called the Dudley & Midland Geological Society". This appears to be a very positive statement suggesting that the second Society simply took over and yet Beckett's remarks together with subsequent references infer that the original Society ceased to function well before 1862.

In September 1849 the British Association again visited Birmingham and special arrangements were put in hand at Dudley. Lord Ward had the limestone caves illuminated and Murchison gave a speech to the assembled party concerning the geology, through a "speaking trumpet". Murchison was instantly recognisable because according to a contemporary edition of the Illustrated London News he wore a high crowned green hat of the Tyrolean Style and a shepherds plaid scarf! (Fig. 2.). It must have been quite an impressive occasion for a poet was moved to write a 220 line ballad entitled 'The Dudley Gathering', which was subsequently published. Yet nowhere is there any reference to the Geological Society. However, it is perhaps spurious to suggest that the Society had already disbanded after only seven years on the strength of somewhat negative evidence.
Sir R.I. Murchison's Address, Dudley 1849
(From the Illustrated London News)

Fig. 2.

Openworks in the Thick Coal.
(From the Illustrated London News 1849)

Fig. 3.
Morell (1969) in his review of Midland societies states that the Dudley Society was the earliest geological society to be formed in the Midlands. So had the Society survived to the present day it would surely have ranked closely with the Geological Society of London.

There are many names common to the early membership lists of the two Dudley Societies with the exception of some of the principal officers. This may be a clue in-so-far as many societies depend, perhaps too much on one or two individuals to manage affairs - The sudden removal of such individuals could have catastrophic results as may be the case in this situation. If any more evidence is forthcoming in the future we may be able to satisfactorily answer this enigmatic problem.

The Second Society

Despite the untimely end of the first Society interest in Geology was still strong and about the end of July 1862 a meeting was held in the Rose Hill School Room, Dudley, when it was resolved to establish a new Society with the title "Dudley & Midland Geological & Scientific Society & Field Club". Edward Grainger (who was then the Mayor of Dudley) occupied the chair and the Society rules were drawn up, and a committee and officers appointed for the ensuing year. Lord Lyttelton had consented to being President and the list of ten Vice-Presidents included Richard Smith F.G.S., S.H. Blackwell F.G.S., and Professor Henry Beckett F.G.S. Mr John Jones and Mr. E. Hollier were appointed joint Hon. Secretaries. (Fig. 4).

A full inaugural meeting was called on Friday, August 15th 1862, at the Dudley Hotel with Lord Lyttelton presiding. Among those present were Professor Tennant F.G.S., and Mr. J.C. Buckmaster (from the science and art department of the British Museum, South Kensington) who had both travelled up from London specially for the meeting.

After the introduction Professor Beckett delivered the Inaugural Address, and paid some attention to the original Dudley Geological Society as mentioned earlier. He went on to give an account of the early history of the earth and the succession of life through geological time. It is worth recording a specific example quoted in his address of the fossil forest which he and a Mr. Sparrow discovered in the Bottom Coal at Parkfields near Wolverhampton. The overlying ironstones were removed by open cast and the stems of nearly eighty specimens of trees in an upright position were uncovered in situ on the surface of the Bottom Coal which was now laid bare. One must assume that the majority of these fossils were either eventually destroyed or were dispersed among the many local collectors. Certainly the whereabouts of any surviving specimens has not been discerned.

Later in the meeting Mr. E. Hollier while in the course of seconding a vote of thanks mentioned that the museum of the old Dudley Society was still in existence although hidden in an old malthouse. Unfortunately nothing else is reported on the subject but the remark does suggest that the former Society had been out of action for some time.

Lunch was taken followed by several addresses after which parties visited Wrens Nest Hill, the old open works for the Thick Coal at Fox Yards, (Fig. 3.) and also the ruins on Castle Hill and the Priory grounds which were thrown open by Richard Smith. After tea the whole group was conducted through the "Silurian Caverns" which were specially illuminated through the kindness of the Earl of Dudley.
TRANSACTIONS OF THE DUDLEY AND MIDLAND
GEOLOGICAL & SCIENTIFIC SOCIETY,
AND FIELD CLUB.

No. 1. DECEMBER, 1862.

ABOUT the end of July a meeting was held in the Rose Hill School Room, Dudley, Edward Grainger, Esq., in the chair, when it was resolved to establish a society under the name of the "Dudley and Midland Geological and Scientific Society, and Field Club." The necessary rules were drawn up on this occasion, and the following committee was appointed for the ensuing year:

**President:**

THE RIGHT HONOURABLE LORD LYTTELTON.

**Vice-Presidents:**

- CORNELIUS CARTWRIGHT, Esq., M.D., Dudley.
- BENJAMIN GIBBONS, Esq., Hill Hampton House, Stourport.
- S. H. BLACKWELL, Esq., F.G.S., Dudley.
- HENRY BECKETT, Esq., F.G.S., Wolverhampton.
- HON. and REV. W. H. LYTTELTON, Hagley.
- GEORGE TAYLOR, Esq., Dudley.
- E. FISHER SMITH, Esq., Dudley.

**Committee:**

- BAIN, REV. J. W., Bilston.
- BIGGE, M. Esq., Wolverhampton.
- BOWLEY, REV. H. B., Oldbury.
- BURTON, JOHN, Esq., M.D., Walsall.
- CAPEWELL, L. P., Esq., Dudley.
- DAVIES, REV. J., Dudley.
- FRASER, J., Esq., M.A., M.D., Wolverhampton.
- DUIONAN, W. H., Esq., Walsall.
- GRIER, REV. J. W., Amblecote.
- GORDON, REV. DR., Walsall.
- HOUSSMAN, REV. H. Wolverhampton.
- KETTLE RUPERT, Esq., Whampton.
- LISTER, REV. W., F.G.S., Bushbury.
- LLOYD, SAMSON Z., Esq., Wednesbury.
- NOOTT, REV. E. H. L., Dudley.
- STOKES, JOSEPH, Esq., Dudley.
- THOMPSON, REV. J. H., Cradley.
- WRIGHT, THOMAS, Esq., Dudley.

**Treasurer:**

EDWARD GRAINGER, Esq., Dudley.

**Jan. Secretaries:**

- MR. E. HOLLIER, Market Place, Dudley.
- MR. JNO. JONES, The Trindle, Dudley.
By the end of the year the membership had risen to over 200 and in addition to many notable names, some of which have already been mentioned above, the list of members includes Henry Johnson (senior) and Mr. W.H. King of Stourbridge who was the father of another famous geologist William Wickham King. The annual subscription had been fixed at five shillings per annum and a specially designed membership card was issued to members and although no trace of one has been uncovered it is hoped that a copy may come to light in the future. At about this time the Society produced its own notepaper and envelopes etc., and adopted a seal with a symbolic centrepiece featuring the trilobite Homolonautus Delphinocephalus (owned by S.H. Blackwell.). Several examples of headed notepaper have been examined but none so far have shown the Society's crest.

Like its predecessor the new Society was particularly desirous of establishing a museum in which fossils illustrative of the Black Country could be displayed. It was also intended to amass as much knowledge of the geology of the area as possible and to incorporate information derived from the mining activities on a large scale ordnance map so that a particularly accurate and detailed geological map would result. This map would then be available for reference at any time and would be of considerable benefit to those involved in practical geological pursuits commercial or otherwise. At this time a new building for the Mechanics Institute (Fig. 5.) was to be built in Wolverhampton Street, Dudley and arrangements were put in hand for the Geological Society to occupy part of the building. The total estimated cost of the venture was £3,800 for buildings and land. The Geological Society contributed some monies but it is believed that most of the cash was raised by Public Appeal and through the generosity of the Earl of Dudley. On November 29th 1862, a number of members took part in the ceremony of laying the Foundation Stone, the Earl of Dudley performed the ceremony and Lord Lyttleton and Mr Blackwell addressed the meeting. In the evening a Scientific Exhibition and Conversazione was held in the Rose Hill School Room which was attended by some three hundred members of the Society and the Institute. Several members and manufacturers loaned exhibits, particularly noteworthy being the extensive collections of Henry Johnson, L.P. Capewell, Ketley and Hollier. A slight loss was made on the exhibition but the members were granted special permission by the Earl of Dudley to search for fossils at both Wren's Nest and Castle Hill on production of their membership cards.

In March 1863 the committees of the two organisations met to finalise the terms of agreement for the use of the new building. The Geological Society subscribed to the building fund but no record of the amount involved seems to exist. But certainly the members were to have free access and the Society was to be responsible for the appointment of a curator and the general arrangements for the museum. The collection of the former Dudley Geological Society was acquired by some means, and entrusted to new Trustees and was to form the basis of the museum display. The museum opened in the latter half of 1863 but a dispute arose in the following year between the Society and the Institute as to the terms of occupancy. Fortunately, however, the dispute was settled with the Institute committee reverting to the original terms of agreement, with the museum and committee room, occupying a much larger proportion of the building as had been planned.

The first Annual General Meeting was held at the Dudley Arms Hotel on May 27th 1863, with Henry Beckett in the chair. It was something of a marathon but a far from dull affair as we shall see. Mr. Jones the secretary, delivered an optimistic annual report and pointed with pride that the membership had risen to about three hundred and fifty. The Earls of Dudley and Lichfield, Lord Lyttleton, Sir
Artist's Impression of the Mechanics' Institute Building

Fig. 5
MEMBERS LIST, FOR 1865

[Partial list of members, including their names and affiliations.]
Roderick Murchison and others had consented to being patrons and many distinguished academics including A.C. Ramsay, J. Beet-Jukes, Professor Tennant, J.W. Salter, Edward Binney, Edward Ward and Edward Hull, had consented to being corresponding members and promised occasional papers. This list was later to include Sir Charles Lyell (Fig. 6. and Fig. 11). Contact with neighbouring natural history societies had been extensive and their officers became honorary members with a reciprocal arrangement. After the official business was completed the members together with a party from the Geologists Association, including their President Professor Tennant and representatives from the Woolhope and Malvern Field Clubs, set out to visit the site of the Institute and Geological Museum, which then was still in course of erection. The party then departed for Wren's Nest Hill, probably for the benefit of the visitors and later inspected the faulting which had been made evident by recent excavations in the middle of the hill. A torchlight procession was then formed and the party passed through the underground workings before returning to the hotel where some one hundred and forty members and guests sat down for lunch at 3.00 p.m. Three papers were delivered after lunch by S.H. Blackwell, Professor Tennant and Edward Hull, the latter being read by Professor Beckett. Hull's paper was about the Triassic Group of Central England. It was a short but valuable paper and no doubt was a precursor to Hull's Geological Survey Memoir which was published in 1869.

At six o'clock the gathering moved out of doors once more, this time to the caverns at Castle Hill which had been specially illuminated again by the generosity of the Earl of Dudley. On this occasion a band performed in "the large cavern" after which J.W. Salter gave a brief address regarding the Dudley limestone. The day was far from over and no better description can be given than to quote freely from the proceedings: "The next point of interest in this long day's proceedings was Mr. Blackwell's furnaces at Russells Hall, where for the special benefit of the visitors from London and elsewhere the operation of tapping two large furnaces was exhibited and afterwards a current of air was made to impinge on a mass of molten iron producing a brilliant shower of sparks and scintillations. An immense crowd collected round the works and as the light from the iron fell upon the motley groups the effect was picturesque in the extreme. The visitors appeared particularly interested in these experiments". The days proceedings were finally terminated with a fireworks display of a more conventional kind in the Castle Ruins.

On the following day visits were arranged for the benefit of the visitors to the Thick Coal pits at Pensnett and the Silurian Rocks at Sedgley. One cannot help but admire the stoic determination and sheer enthusiasm of the Society. No doubt the presence of influential members who were personally involved in the practical aspects of geology or mining was of considerable benefit.

1863 was a particular busy year and not content with all the other activities the Society sponsored what must be the earliest "extra mural" classes in geology (Fig. 7). Unfortunately no record other than the first announcements advertised in the Proceedings has come to light so there is no way of telling whether or not the classes ever were held and how successful they may have been.

Following the successful conversazione held in 1862, a similar event was planned for early 1864. This time it was held in St. George's Hall, Wolverhampton, on the evening of Friday, January 22nd. Exhibits were provided by the members and included archeological and botanical objects and minerals. Five short papers were read and to complete the entertainment the services of the First Wolverhampton Rifle Corps Band and the Harmonic Society were secured! It proved to be another successful affair with the one drawback that it only lasted for one day so it was resolved subsequently to hold a full scale exhibition to be held in April.
IN CONNECTION WITH THE
DUDLEY AND MIDLAND GEOLOGICAL SOCIETY

A CLASS
FOR
INSTRUCTION IN THEORETICAL GEOLOGY

(Conducted by Mr. Jones.)

Will meet every Tuesday Evening, at the Mechanics' Institute,
Wolverhampton Street, Dudley, (commencing September 2nd.)
at Seven o'clock.

Entrance Fee, 2s.; Fee per Quarter of Ten Evenings, 2s. 6d.
to Members of the Geological Society or Mechanics' Institute;
and 2s. to Non-Members.

A CLASS
FOR
INSTRUCTION IN PRACTICAL GEOLOGY,

Will be commenced in January, at the same place.

(Conducted by Professor Beckett.)

Entrance Fee, 2s. 6d.; Fee per Term of Ten Evenings, 3s. to
Members, and 10s. to Non-Members.

Samuel Mills, Printer, Wolverhampton Street, Dudley.
This exhibition was held from April 12th - 19th at the Mechanics' Institution in Dudley, and a conference of Mine Agents was also arranged to coincide with it. The exhibition was divided into four sections. The first consisted principally of the Society's collection of local fossils the majority of which were derived from the first Dudley Geological Society. The second section was also devoted to geological specimens but these belonged to private collections notably those of Messrs. Hollier, Blackwell, Ketley, Burton, Johnson and Ward. The third section comprised a miscellaneous array of manufacturers and individual displays ranging from gas furnaces, steam gauges and chemicals to Worcester porcelain, leather goods and photographs. The fourth section was devoted to paintings obtained on loan from several local collectors.

The conference of Mine Agents, Proprietors and general members was held on the evening of the 13th April and was very well attended. Rupert Kettle commenced the proceedings with an important paper on "The Yield of the Ten Yard Coal and the Best Method of Increasing It, Having Regard to the Safety and Economy of Working". However the implications were no doubt far reaching and discussion was adjourned until the paper could be printed and circulated to enable all those present to study Mr. Kettle's statements in more detail.

The second Annual General Meeting was held on 27th May 1864, and at that meeting two classes of membership were instituted. Why this decision was taken is hard to tell but it may well have been a practical decision to keep a sufficiently large body of members interested in the less academic pursuits of the science, or possibly to increase revenue. Ordinary Members subscriptions became One Guinea per annum and Field Club Members remained at five shillings. A move to adopt a single tier membership with subscription of half a guinea was not carried. This may confirm that the original resolution was made on financial grounds. However, in 1871 single tier membership was restored at half a guinea per annum at a time when ordinary meetings had almost ceased.

Ordinary Members were allowed to attend the general meetings and would also receive copies of the transactions. The Field Club Members as the title suggests were only eligible to attend the field meetings. It is recorded that the changes caused some unsetlement among the members but evidently things calmed down satisfactorily as the membership list for 1865 included 136 Ordinary Members and 225 Field Club Members.

Later in the year a small deputation attended the Bath Meeting of the British Association for the purpose of supporting an application for the Association to visit Birmingham in 1865. The invitation was accepted and the Society played no small part in the arrangements which were considered very interesting and successful. Some members presented papers to the Association but unfortunately no further details are available.

1866 proved to be a busy year as well and the Society vigorously applied its energies to another exhibition this time sponsored by the Earl of Dudley. The exhibition featured a collection of the Earl's pictures together with examples of local arts and manufacturers. By agreement the Society received a quarter of the proceeds with which many fossils were purchased for the museum. Before the exhibition closed Professor Jukes gave a short address on "Siluria" in the caverns at Dudley which were referred to as "Sir R. Murchisons Green". The caves were illuminated again by the generosity of the Earl of Dudley.

Up to this point, this narrative has dealt primarily with special events and the general administration of the Society. However, the principal activities of the Society by and large fell into two categories, Ordinary meetings and Field meetings.
The Ordinary meetings were restricted to full members of the Society and generally speaking occupied the winter season which could run between September and April. They were the scene of many interesting and diverse papers in the main presented by members of the Society. It would be pointless to list them all but interesting to briefly mention some of the more important ones.

March 1863 The Geology of Castle Hill by E. Hollier.
This paper is important in that it details stratigraphical locations of some of the important fossil discoveries.

May 1863 The Triassic Group of Central England by Edward Hull.
The Early works of the Geological Survey as mentioned earlier.

April 1865 Means of Extending the S. Staffs Coalfield by Henry Johnson.
An important paper in which Johnson outlined his ideas for new sinkings to extend the coalfield.

April 1865 Distribution of Organic Remains in the Upper Silurian by Samuel Allport.
This paper dealt with the distribution of Trilobite species in the Wenlock and Ludlow formations.

The Lists of fossils in the "Silurian System" by Murchison were regarded as worthless in that only three trilobites are recorded from the shales of the Wenlock and Ludlow formations. When this paper was presented the shales at Malvern and Dudley had together yielded over thirty species! Eighteen species recorded from the Wenlock Shale and sixteen species from the lower Ludlow Shale with only four species occurring in both of the two groups. The lists were prepared chiefly for the British Association visit but whether or not the information has ever been used subsequently or enlarged upon is unknown.

After a few years the popularity of Ordinary meetings apparently waned (they had in fact never reached expectations) and the presentation of papers took on a much more irregular pattern. However, leading geological personalities were still attracted to the Society. In May 1874, Henry Woodward F.R.S. F.G.S., gave a lecture "The Dawn and Development of Life on the Earth". This paper was separately printed and issued as a small booklet. Charles Callaway D.Sc., who originated the term "Uriconian" for certain rocks of Pre-Cambrian age notably at the Wrekin delivered short addresses to the Society at Lilleshall Hill in 1891 and also at the Wrekin in 1889. Professor Lapworth presented a paper on the Pre-Silurian Rocks of the Midlands at the Annual General Meeting in 1883 and the following day led a field trip to Nuneaton to illustrate his paper. He also delivered an address to the Annual General Meeting of the Midland Union of Natural History Societies in 1891. In his address which was also later reprinted in a separate booklet he gives credit to several members of the Society for their work and service to local geology.
Finally, mention should be made that on a field trip to Church Stretton in 1889 the party was conducted by E.S. Cobbold then only "Mr". However, field meetings were undoubtedly the most popular of all the Society's activities. It was not unusual for gatherings of sixty to eighty in number which was really remarkable particularly considering the difficulties of transportation in those days. Not unnaturally local field meetings figured prominently and one cannot help but feel a little envious that the members were able to visit working collieries, the famous Claycroft open works (where the Thick Coal was literally quarried) and many other famous sites that now are either overgrown or have been re-developed. The Society was instrumental in mapping many of the faults at Wren's Nest which had become evident in what were new workings in the 1860's, and in similar fashion were able to record much scientific information about Black Country Geology as facts were uncovered as a result of mining operations.

In 1877 a Field Meeting was held at Sandwell, Hamstead and the Perry New Sinkings. The party assembled at Sandwell Park Colliery and, under the guidance of Henry Johnson (Senior) and his son (both of whom were Society members), was able to examine the workings both above and below ground. Also on display were fossils collected during the sinking. This trip typified the value of members who were engaged in geological pursuits, whether they were agents, managers or owners. Field meetings further afield were a regular feature of the Society's programme and trips to most of the classic areas were organised over the years. Trips as far away as Cheddar, Dovedale, Oxford and Cambridge were also included.

Except for the local meetings, field trips quite often involved early starts and late returns because transportation was, of course, either horse drawn or by train. Arrangements for a field meeting to Cheltenham, published in 1864, make interesting reading and as can be seen (Fig. 8) involved a very early start so that proceedings commenced in Cheltenham at 9.00 in the morning.

During the period of the Society's existence about a dozen two day field meetings were organised for the more distant locations. The visit to Llangollen in 1864 which was held in conjunction with the Manchester and Liverpool Geological Societies, was reported in rather more detail than most and gives some insight into the almost leisurely (if field work ever can be) but graceful manner in which the Society conducted itself. The party journeyed to Llangollen arriving at mid-day by train from Wolverhampton (about three hours). On the first day the party walked to the Flagstone quarries (about two miles) and returned to Llangollen via Valle Crucis Abbey, Eglwyseg Rocks and Castell Dinas Bran. A "cold collation" was prepared at the Hand Hotel at 5.0 p.m. at the cost of two shillings each exclusive of beer etcetera. During the evening a meeting was held at which papers were delivered by various members of the participating Societies.

Sleeping accommodation was available at the Hand Hotel at a cost of two shillings and six pence including servants! The second day commenced at 9.00 am and was devoted to visiting Llansaintfraid (where refreshments were served at 11.00 a.m.) and Glynn Ceiriog returning to the Hand at 3.00 p.m. for lunch and catching the return train to Wolverhampton at 4.15 p.m.

An interesting feature of a great many other field meetings was the involvement and co-operation with other natural history Societies. Indeed, the executive officers of the Severn Valley Field Club, Woolhope Field Naturalists Society, Cotswold Naturalists Society, The Worcestershire Field Club, were all honorary members of the Dudley Society. The great benefit of joint meetings was the interchange of scientific knowledge and, of course, the provision of expert guides.
CHELTENHAM FIELD MEETING.

The next Field Meeting will be held at Cheltenham on Monday, August 15th. As a Special Train will run from South Staffordshire on that day it has been deemed advisable to change the date originally fixed, in order to obtain the cheap excursion fares, and also the advantage of several hours longer stay at Cheltenham than could be arranged by ordinary trains. Those Members who take three day tickets will have an opportunity of meeting the Cotteswold and Malvern Clubs on Wednesday. Carriages will be reserved for Members, and will be labelled "Dudley Geological Society." The Train will reach Cheltenham about 9 a.m., and after spending an hour in the town the party will proceed by carriages to "Seven Springs" the source of the Thames. They will thence cross over to Leckhampton Hill which affords a fine section of the Inferior Oolite, Upper Lias, and Marlstone. The extensive plain at the foot of the Cotteswold range is formed of the Lower Lias, which is exposed in brick pits near Cheltenham. The Marlstone (Middle Lias) forms the basement of the hills, and is succeeded by the Upper Lias. This consists of blue clay with occasional beds of calcareous matter, and above of a considerable thickness of brown sand crowned with a thin stratum remarkable rich in Ammonites, &c., and hence termed the "Cephalopoda bed." The Inferior Oolite is well developed in the district, particularly at Leckhampton Hill, where it is admirably exposed in the freestone quarries. The formation consists of about forty feet of coarse rock termed "Pea Grit," containing numerous fossils, particularly Echin., Corals, and Crinoids. The Oolite Freestone, consisting of Lower Freestone, Oolite Marl, and Upper Freestone is extensively quarried for building purposes, and affords a section nearly 130 feet thick. The Upper Member of the Inferior Oolite is the Ragstone which caps the hill and is about 40 feet in thickness. The party will assemble, for dinner, at the Queen's Hotel, at 4.30 p.m. at the usual charge. Members intending to be present are requested to inform the Secretary not later than Saturday morning, and also to state whether they purpose dining with the party.

- The Special Train will leave as under:-

<table>
<thead>
<tr>
<th>A.M.</th>
<th>Walsall</th>
<th>Wolverhampton (low level)</th>
<th>Bilston</th>
<th>Birkenhead</th>
<th>Dudley</th>
<th>Brierley Hill</th>
<th>Brettell Lane</th>
<th>Kidderminster</th>
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This will be a Special Fast Train from Wolverhampton. The Return Train will leave Cheltenham 7.45 the same evening, and on Wednesday, August 17th. Members travel to Dudley from Birmingham at 6.0, Smethwick at 6.10, Oldbury 6.15, Walsall 6, Wednesbury 6.8, Great Bridge 6.13, paying ordinary fare, and join the Excursion at Dudley.

Arrangements for Cheltenham Field Meeting, Journal No. 2 1864

Fig. 8.
<table>
<thead>
<tr>
<th>Transactions</th>
<th>No. 1</th>
<th>Vol. 1</th>
<th>December 1862</th>
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<tr>
<td>Proceedings</td>
<td>No. 2</td>
<td>Vol. 1</td>
<td>June 1863</td>
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<td>Journal</td>
<td>No. 1</td>
<td></td>
<td>July 1864</td>
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<td>Journal</td>
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<td>Vol. 1</td>
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<td>Transactions</td>
<td>No. 4</td>
<td>Vol. 1</td>
<td>November 1864</td>
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<td>No. 5</td>
<td>Vol. 2</td>
<td>February 1865</td>
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<td>Vol. 2</td>
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<td>No. 8</td>
<td>Vol. 2</td>
<td>December 1867</td>
</tr>
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<td>No. 1</td>
<td>Vol. 3</td>
<td>July 1875</td>
</tr>
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<td>No. 2</td>
<td>Vol. 3</td>
<td>May 1876</td>
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<td>Vol. 3</td>
<td>June 1877</td>
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<td>September 1877</td>
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<td>No. 5</td>
<td>Vol. 3</td>
<td>December 1877</td>
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<td>Proceedings</td>
<td>No. 1</td>
<td>Vol. 4</td>
<td>December 1878</td>
</tr>
<tr>
<td>Proceedings</td>
<td>No. 2</td>
<td>Vol. 4</td>
<td>November 1891</td>
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<td>Proceedings</td>
<td>No. 3</td>
<td>Vol. 4</td>
<td>March 1893</td>
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<td>Proceedings</td>
<td>No. 4</td>
<td>Vol. 4</td>
<td>May 1895</td>
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<tr>
<td>Proceedings</td>
<td>-</td>
<td>-</td>
<td>July 1901</td>
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Other Publications

"The Dawn and Development of Life on the Earth"
Henry Woodward 1874

"The Geology of Dudley and the Midlands"
Professor Lapworth LLD FRS 1891

"Fossil Flora and Fauna of the Midland Counties of England"
L.P. Capewell 1864

This list is probably far from complete and the author would welcome information regarding any additional works.
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Advertisements included in the Dudley Geological Society Journal No. 1 1864

Fig. 10
to the localities visited, who would not otherwise have been available. Geology was of course the main pre-occupation of the Dudley Society but frequently field meetings would split into two parties, one for geology, the other being devoted to botany. In turn the Dudley Society acted as hosts to many parties of visitors who wished to see the geological attractions of the Black Country.

Field meetings were almost always held on weekdays so in many ways the Society was fortunate that its activities were so well patronised. One assumes that in effect the Society recruited its members mainly from the professions or local industrialists, a situation which would still very largely be repeated today. Contemporary Societies with much broader membership profiles normally opt for weekend excursions although one must also take into account that Sunday observance is not now so widespread as in the nineteenth century.

The Society published Transactions or Proceedings on a somewhat irregular basis (Fig. 9). Nevertheless, they present an interesting and valuable record of the Society's activities. Initially Transactions were published on a regular basis and contained papers which are still of geological interest. In these early years they also record the activities of the Society in much more detail but in the course of time the later editions tended to become just records of field trips. One edition of the short lived journal carried advertisements which today make fascinating reading (Fig. 10).

It is interesting to note that the periods when Transactions were published correspond with changes of secretaries (Fig.11) and this no doubt reflects attitudes and enthusiasm of the various holders of this office.

The most dynamic period was most certainly that time when John Jones was secretary. When he left the district to live in Nuneaton in 1866 the Society felt a very genuine loss. This point comes over very strongly although of course the Society was by no means dead and it survived for nearly another forty years.

The Transactions did, however, account for a very large proportion of expenditure, indeed, printing generally was always a considerable drain on resources, and this factor may well have contributed to the irregular pattern of publication. Annual Reports were invariably printed separately as were some of the more important papers which were presented to ordinary meetings.

In later years the publication of Transactions was possibly an unnecessary luxury, which could be ill afforded, since activities of the Society had waned considerably and annual reports were published in any case. Nevertheless, these published works have been useful reference material without which much of this paper would have been impossible.

Sadly, the Society did not survive for long into the present century. The reasons why are not yet absolutely clear and are the subject of further research. However, finance was no doubt an important factor. Income from members subscriptions in 1900 amounted to £34.2s.6d. compared with over £150 in 1865.

The level of membership had with certain minor exceptions declined steadily ever since the late 1860's although it was still fifty six in 1901. This may be partly due to social reasons, the era of the "gentleman scientist" was coming to an end and membership was drawn predominantly from the ranks of industrialists and the middle classes generally. Not inconsiderable losses of members must have been made when a Mine Agents Association (which later became the S. Staffs & E. Worc's Institute of Mining Engineers) was established in 1867 and also when a similar organisation known as the South Midland Institute of Civil Mining and Mechanical Engineers was founded in Wolverhampton in 1869.
### Presidents

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Name</th>
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<tbody>
<tr>
<td>1862 - 1863</td>
<td>Lord Lyttleton</td>
</tr>
<tr>
<td>1864 - 1870</td>
<td>Earl of Dudley</td>
</tr>
<tr>
<td>1871</td>
<td>Professor A.C. Ramsay</td>
</tr>
<tr>
<td>1872</td>
<td>E.F. Smith, Esq.</td>
</tr>
<tr>
<td>1873</td>
<td>Rev. J.H. Thompson, M.A.</td>
</tr>
<tr>
<td>1874</td>
<td>William Madeley, Esq.</td>
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<tr>
<td>1875 - 1878</td>
<td>Charles Cochrane J.P.</td>
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<td>1879</td>
<td>J. Fraser M.D.</td>
</tr>
<tr>
<td>1880 - 1882</td>
<td>A. Freer M.R.C.S.</td>
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<tr>
<td>1883 - 1884</td>
<td>H. Johnson (Senr) F.G.S.</td>
</tr>
<tr>
<td>1885 - 1886</td>
<td>J. Amphlett, Esq.</td>
</tr>
<tr>
<td>1887 - 1888</td>
<td>Horace Pearce F.G.S.</td>
</tr>
<tr>
<td>1889 - 1890</td>
<td>C. Tylden Wright</td>
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<tr>
<td>1891 - 1901</td>
<td>G.H. Claughton, Esq.</td>
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### Honorary Secretaries

<table>
<thead>
<tr>
<th>Year Range</th>
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<tbody>
<tr>
<td>1862 - 1863</td>
<td>Mr. John Jones and Mr. E. Hollier</td>
</tr>
<tr>
<td>1864 - 1866</td>
<td>Mr. John Jones</td>
</tr>
<tr>
<td>1867 - 1870</td>
<td>Mr. W. Madeley</td>
</tr>
<tr>
<td>1871</td>
<td>Mr. W. Madeley and Mr. E. Terry</td>
</tr>
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<td>1872</td>
<td>Mr. W. Madeley</td>
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<tr>
<td>1873</td>
<td>Mr. E. Terry</td>
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<tr>
<td>1874 - 1877</td>
<td>Mr. E. Marten</td>
</tr>
<tr>
<td>1878</td>
<td>Mr. E. Marten and Mr. Bolton</td>
</tr>
<tr>
<td>1879 - 1889</td>
<td>Mr. W. Madeley</td>
</tr>
<tr>
<td>1890 - 1893</td>
<td>Mr. W. Madeley and Mr. W.W. King</td>
</tr>
<tr>
<td>1894 - 1899?</td>
<td>Mr. W. W. King</td>
</tr>
<tr>
<td>1900 - 1901</td>
<td>Mr. H. Johnson (Jnr) and Capt. J.W. Roberts.</td>
</tr>
</tbody>
</table>
Presentation of scientific papers had dwindled comparatively early in the Society's history and it may be that this aspect of its activities was linked to the fortunes of the area as a mining district which was then beginning to decline. Certainly the Society did not possess in its later years the zest and sheer dynamism that it did when first established. As intimated earlier this must also reflect the particular secretaries and committees at different times. The Society itself felt that greater facilities for the active student were afforded by the technical classes of the district and at Professor Lapworth's classes at the newly chartered University of Birmingham, which no doubt was true.

Without youthful replacements for the membership the Society was destined to come to an end for the financial burden of the museum would become too great without outside assistance. Although no details have yet been unearthed there was a special procedure laid down in the rules for the winding up of the Society but ultimately the museum collection of books and fossils which included many type specimens fell into the hands of the local authority. Today part of the collection is displayed in Dudley Museum but a considerable section of the collection still lies hidden. A rather sad epitaph for two geological societies which had colourful and exciting histories and were directly responsible for so much of our knowledge of Black Country geology.

Acknowledgements

The opportunity to examine material at the Central Library, Dudley and at Messrs. Johnson, Poole and Bloomer, Brierley Hill is gratefully acknowledged.

REFERENCE