



NEWSLETTER No. 26 - APRIL 1981.

Editorial.

In this season when the bulbs spring brightly upwards and the clocks leap forward, geological field events reach the final stages of their long winter planning. The major field event of the year is the weekend visit to Anglesey in May, and members are asked to note that bookings need to reach the new field secretary by April 16th.

A report on the Annual General Meeting will appear in the next newsletter. Anne Harrison has taken over from Tim O'Mara as field secretary, since Tim had found that by now he had time either to attend meetings or to help organise them, but not both, and he preferred to attend meetings!

There is another programme of guided walks this year, in co-operation with the Countryside Commission. Details are given in the newsletter. Last year these walks provided the society's biggest profit.

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Forthcoming Meetings.

April 6th, Monday. Meeting before field trip.

April 12th, Sunday. Field trip to the Malvern Hills. Leader Mr. S. McNicol of Wolverhampton Polytechnic. To include Hereford Beacon, Gullet Quarry, Hollybush Hill and other exposures towards Ledbury. This meeting will concentrate on the Silurian rather than the Malvernian. Depart Dudley 10am. and British Camp 11am.

May 15th, Friday to May 17th, Sunday. Weekend field trip to Anglesey. Leader Dr. D.E. Bates of the University College of Wales, Aberystwyth. Itinerary and other details on the next page.

May 18th, Monday. Members' Night. Talks by Paul Shilston and Geoff Thompson. Details of both on the next page.

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Meetings are held at the Allied Centre, Green Man Entry, off Tower Street, Dudley. (behind the Malt Shovel Pub) Indoor meetings will commence promptly at 8pm. with coffee and biscuits from 7.15pm. Field meetings will depart from outside the Allied Centre.

Non-members welcome.

To members and visitors on field trips:-  
The Society does not provide personal accident cover for members or visitors on field trips. You are strongly urged to take out your own personal accident insurance cover to the level which you feel appropriate. Schools and other bodies attending field trips should arrange their own insurance cover as a matter of course.

Chairman  
A. Cutler B.Sc., M.C.A.M.,  
Dip. M., M. Inst. M.

Vice Chairman  
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F.G.S.

Hon. Treasurer  
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M.I. Geol., F.G.S.

Hon. Secretary  
P. D. Shilston M.A., C. Eng.,  
F.I.E.E., M.I. Mech. E.

Conservation Secretary  
C. Mitchell T. ENG. (CEI),  
F.S.C.E.T., F.S.S.

Field Secretary  
T. J. O'Mara B.A.

Future Programme.

April 12th. Details on front page.

May 15th - 17th. Weekend in Anglesey. From Glenrafon Hotel, Benllech Bay. Cost depends on the number in the party, but will be about £35 per person for the whole weekend including meals. There are two single rooms, and these will be allocated to the first applicants.

Applications to Anne Harrison, 67 Woodbourne, Norfolk Road, Edgbaston, Birmingham B15 3PJ. Tel. 021-454-6416, by April 16th, at the latest, with £10 deposit per person.

There will be no preliminary meeting. Dr. Bates has suggested as preliminary reading:-

1. Geology Explained in North Wales, By Challinor and Bates, published by David & Charles, 1973.

2. Geologists' association guide to Anglesey, obtainable from Geologists' Association, Burlington House, Piccadilly, London, W1V 0JU. Price £2-25. (There is another new guide, to the Lleyn, at the same price).

Places to be visited to be selected from:-

Upper Palaeozoic,

Carboniferous, Lligwy Bay  
Old Red Sandstone, "

Ordovician,

Carmel Head thrust zone,  
Ordovician shales and  
Precambrian,

Parys mountain, mineralisation  
and igneous rocks.

Mona Complex,

Newborough pillow lavas and  
cherts, blue schists.

The north coast, Gwna mélange  
and Ordovician rocks.

Holy Island, structures and  
low grade metamorphism.

May 18th. Monday. Members' Night.

This meeting provides an opportunity for members to talk on their favourite topics.

a) Volcanic Features of Iceland  
and of the Canary Islands.

Paul Shilston will give a commentary on his holiday slides, which include hot springs and the inside of craters.

2) Trilobites from a newly discovered site within the Ddolhir beds of the Corwen area of north Wales. (Ashgillian, Upper Ordovician).

Geoff Thompson will discuss these with reference to the high proportion of complete specimens found, including well preserved specimens new to Wales. The present research is being undertaken by Geoff Thompson and Dr. D. Price of the Sedgwick Museum in Cambridge. Specimens will be displayed.

June 14th. Sunday. Field trip to the Cotswolds. See stop press, page 6.

June 29th. Monday. Evening field trip to a site of local interest led by Alan Cutler.

July 12th. Sunday. Visits to Chatterley Whitfield Mining Museum and Gladstone Pottery Museum. There will be a coach if there is sufficient demand.

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Geological guided walks - Run jointly by the Countryside Commission and B.C.G.S

Doulton's Claypit:-

June 7, July 5, Aug. 2, Sept. 6.

Meet at Chain Shop, Mushroom Green, Quarry Bank, in the car park.

Since these are the first Sundays in the month, visitors will be able to see the chainshop in operation. (See Dec. 1980 newsletter)

Cotwall End:-

June 14, July 12, Aug. 9, Sept. 13.

Meet in car park at Cotwall End Nature Centre, Sedgley.

Wrens Nest:-

June 21, July 19, Aug. 16, Sept. 20.

Meet by the King Arthur Public House at the corner of Priory Road and Birmingham New Road.

All meetings at 3pm. on Sundays.

Charges, adults 50 pence, children 20p.

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B.C.G.S. Committee Meetings:-

General. Apr. 13, June 22, Sept. 7, Nov. 9.

Conservation. Apr. 27, July 13, Sept. 28, Nov. 21

All at 8pm.

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Field Trip to the Lickey Hills.

November 2nd. 1980. Leader Mr. W. Hardie.

This was the first time that the Lickey Hills had featured on the B.C.G.S. programme, and although Lickey is not Black Country, the area is certainly local. There are structural links with the Black Country-South Staffs. coalfield. The outcrops lie at the south east end of the main structural axis, and some of the major faults lie parallel to it.

We met at the Golf Course Club House, Rubery, where we were given a short introductory talk by our leader Bill Hardie from Birmingham University. We moved off on foot for a short distance into the Rednal Gorge, where we examined Cambrian Quartzite in an old quarry. The quartzite had quite a noticeable pink tint, in contrast to its usual white colour. The colouring is derived from adjacent red bed formations.

We then followed the road to Barnt Green along the Bunter outcrop, which was not visible, to another old quarry again in the quartzite. In this quarry a spectacular overfold was seen together with noticeable bands of darker colouring caused by the presence of felspathic ash. We moved further along the flank of the ridge at a brisk pace to Kendal End Farm where a somewhat insignificant exposure of the Precambrian Volcanics was inspected. Although the outcrop is small, it makes an interesting addition to our table of local formations. Within the Precambrian, a small faulted block of Wenlock Limestone occurs, and it was possible to find the familiar grey-buff limestone adjacent to a now partly filled excavation.

Further west in the farm grounds the change in topography was seen where the softer Keele Beds occur. Unfortunately there were no good

exposures, so we made our way back to the main road and then followed the footpath north back over the ridge. It was a fine morning for the walk although Bill Hardie's brisk pace made one or two of us realise how unfit we were. The last exposure before lunch was of Bunter Pebble Beds just south of Rednal Road, where they form a small escarpment adjacent to the Keele Beds.

In the afternoon we set off across the golf course where small bench features were clearly visible on the greens. Although only poor exposures, they are due to sandstone bands in the clay of the Keele Beds. Leaving the golf course, we entered the woods and by walking along a stream were able to see the sandstone and red Keele clay exposed. These were seen most clearly by those who walked in the stream rather than along its banks! Further up the stream we saw the junction of the Permian Clent Breccia with clay which is Carboniferous. We were taken to see several other exposures of Clent Breccia, which contains angular fragments and was probably laid down in a flash flood. It has a characteristic purple colour and forms a conspicuous escarpment. Away from the stream in the woodland, the boundary between the breccia and the clay is not easy to identify as it is obscured by glacial drift. Several members of the party wrongly identified the boundary as a few feet above its true level.

Mr. Hardie's energy seemed endless and the afternoon passed far too quickly. His detailed knowledge of the Lickey area was clearly apparent as he pointed out the geological significance of almost every detail of the path we followed. Those of us with little experience of field geology marvelled at the amount of information he was able to give us, and which must have taken years of field study to acquire. We were all most grateful to him for giving us such an interesting and enjoyable day.

A.C. & A.H.

Field trip to the Walsall Area.

January 18th. 1981. Leader Mr. Mark Chamberlain.

Despite the rain and cold weather, a great variety of geology was seen in a relatively small area. The first site we visited was at the Hay Head quarries where after wading through mud we found a few overgrown exposures of Barr Limestone, which is Silurian in age, and shows thin shale partings. The Barr Limestone is the only outcrop of its kind, but is thought to be the equivalent of the Woolhope limestone found in the Welsh Borders. Although largely quarried away, it is about 30 feet thick with a gentle dip towards the north west. The characteristic fossil of the Barr Limestone is the trilobite *Bumastus burriensis*, but it was not found by any member of the group.

Further down the line of quarries at Hay Head exposures of overlying Wenlock Shale were seen, but the main point of interest was the two volcanic ash bands within the shale itself. The ash bands are only a couple of centimetres thick, and stand out because of their pale cream colour. They have been altered to a clay-based material known as bentonite, which is a type of Fullers' Earth, and is extracted in commercial quantities in some places in America. It consists mainly of the clay mineral montmorillonite.

The structure around Walsall is basically a faulted anticline, with the Eastern Boundary fault complex running through it. The fault zone was crossed as we made our way towards Barr Beacon. The only evidence we could see to mark the fault was the contrast in soil colours, between the light Barr Limestone colour and the darker coal measure material.

Barr Beacon lies on the eastern flank of the anticline, and consists of Permo-Triassic Hopwas Breccia and Bunter pebble

beds. Pinfold Lane quarry was visited at the base of the Barr Beacon escarpment where a good section of Bunter pebble beds resting on Hopwas Breccia was seen. The junction between the two lithologies is thought to be an unconformity although there is no solid evidence for this, except for the marked distinction between the two rock types. The Hopwas Breccia consists of clays, siltstones, angular pebble beds and sands, which are all thinly bedded and have the same orange-red colour. This mixture of lithologies indicates that the deposit is not a uniform aeolian type of deposit such as that so commonly seen in the Permo-Triassic sequence. Structures such as small scale cross bedding and channel fills indicate a riverine environment.

The Bunter Pebble Beds consist of sands packed with rounded pebbles of quartzite sandstone, conglomerate and tourmaline. The roundness of the pebbles indicates that they have travelled a long distance, unlike the angular pebbles of the Hopwas Breccia, and the presence of tourmaline indicates that they may have been derived from the south-west of England. The Bunter Pebble Beds are thought to have originated from a northward flowing delta fan, blown across a flat monotonous desert landscape in Permo-Triassic times.

Daw End railway cutting is still in use and not accessible, but the north-westerly dipping Wenlock Limestone was seen from a canal bridge. This limestone contains rounded masses of unbedded reefs, known locally as crogballs. These are packed with corals such as *Halysites*, and brachiopods, and it was a pity we could not see them in more detail. We were able to collect fossils in a more accessible part of the railway cutting off Bosty Lane. *Atrypa*, solitary horn corals and crinoid fragments were the typical fossils.

Finally in the nearby Linley quarries we saw the limestone mine entrances which spread underground as far as Walsall town centre 3 miles away. There are also exposures of coal measure sandstone lying unconformably on Silurian nodular limestone. The

coal measure sandstone contained cross bedding and a channel fill in the nodular beds.

My thanks go to the group who braved the mud and the cold, wet weather, and patiently listened to me.

M.C.

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South American Journey.

December 8th. 1980.

This talk by Sheila and Neil Pitts was the first to be held at the Allied Centre. It was about the achievement of a lifetime's ambition to spend one of our winters in South America. The serious planning of the journey took a year and a half, and included the acquisition of many maps from various countries, and the learning of Spanish. A large collection of books and maps were on display, including unusual geological maps and Admiralty charts. There were also some geological specimens, including a thin section of a basalt from the continental divide in Patagonia.

The talk began with a description of the route, which was over 30,000 miles and all by land or water transport except for the last day's flight to London. It had been intended to divert from Tierra del Fuego to the Falkland Islands and Antarctica for 18 days, but a few days before this the ship was wrecked so it was not possible. There were no other problems. The journey was then illustrated with slides.

From Italy the ship called at southern European ports, then crossed to Rio de Janeiro in Brazil, where there were views of the lovely harbour, Sugar Loaf and Corcovado with its Christ statue. Buenos Aires and the nearby areas of Argentina were then shown, and the crossing of the pampas, with their familiar breeds of British cattle. On the final bus journey towards the Andes in northern Patagonia, the aridity,

empty roads, and barren boulder strewn landscape contrasted strongly with far away England.

Bariloche, the main centre in the Andes lake district, is an international ski resort in winter. Its scenery is overwhelmingly lovely in the Swiss mountain and lake tradition but much larger, and its luxuriant vegetation comes to a stop about two miles east of the town. Six weeks were spent travelling around the Andes and three of the national parks.

Journeys were then made through the Andes by different routes into southern Chile and the Pacific coast at Puerto Montt, where the southern end of the longitudinal valley becomes submerged. The spectacular volcanoes of the area, made famous by Darwin, are surrounded by fjords, lakes and fertile dairy country.

The final sea voyage was made from Buenos Aires on the round South America container service, via the Strait of Magellan with its menacing rocks and islands. Visits were made to the Pacific coast countries of Chile, Peru, and Ecuador where a 13th. wedding anniversary coincided exactly with the equator itself. Brief visits were made to Los Angeles, San Francisco and Vancouver, then Canada was crossed by train via the Fraser River route, and past the dazzlingly brilliant snows, frozen lakes and rivers of central Canada.

The Canadian winter was matched by the sub-zero weather of Dudley, and must have frozen the willing hands of the many members who joined in helping to load up the the Pitts car before thawing out at home. S.P.

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Birmingham Museum and Art Gallery,  
Geological Collection.

The curator, Mr. David Waller, would like members to know of this collection, which is not on public view. He would like members to use it, and is also keen to see members with questions about identification. Weekdays are the best times for him, but he is willing to make other arrangements if members will contact him.

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Expert Errors Encourage Modest Members.

The advent of April fool's day has encouraged Paul Shilston to send in the following genuine mistakes, reported in the Geological Curators' journal. Museum Exhibit.

A first class example of inaccurate labelling was discovered in 1971 in Durham. The object was exhibited in a South Shields museum as a Roman sestertius coin, minted between AD 135 and 138.

Miss Fiona Gordon, aged nine, pointed out that it was in fact a plastic token given away free by a soft drinks firm in exchange for bottle labels. When challenged to provide evidence, she said, "I knew because the firm's trade mark is printed on the back."

A spokesman for the Roman Fort museum said, "The token was designed as a Roman replica. The trouble was that we construed the letter 'R' on the coin to mean 'Roma'. In fact it stood for the soft drink manufacturer 'Robinsons'." Wrong Identification.

Members of a scientific mission from Madrid who have been examining the skeleton of a dinosaur discovered near Tetuan, Morocco, have come to the conclusion that the remains are really those of a hay-making machine abandoned by a Spanish farmer in 1917.

Although the original investigators were in error in mistaking the curved iron teeth of the rakes for the ribs of a species of dinosaur known only in the Rocky mountains, they were clearly right in giving a transatlantic origin to their discovery, for it bears the name of a well-known Canadian manufacturer of agricultural machines.

Since these stories are genuine despite the date, there must surely be hope for us all.

Further Geological Holidays.

1. Snowdonia National Park Study Centre. July 5-11. Geology and scenery. Apply to Miss E. Sunderland, Vaughan College, St. Nicholas Circle, Leicester LE1 4LB. Full board. £91.
2. Shoreline Holidays, 23 Downs View, Bude, Cornwall. EX23 8RG. Oct. 17-24. £68. Directed by Dr. Freshney and Dr. Taylor of I.G.S.
3. "The Evolving Earth" July 25 - Aug. 1st. Res. £75. Non-res. £45. Apply Secretary, Summer school for adult students, Rewley House, 3 Wellington Square, Oxford OX1 2JA.
4. Geology of Arran. Sept. 19 -26. £79 full board. Apply to Staff Tutor in geology, Dept. of Extra-mural Studies, 32 Tyndalls Park Road, Bristol BS8 1HR.
5. Geology of the S.W. United States. Advance notice for Oct. 1982. Off-season travel, should not exceed £325 for 2-3 weeks' field excursion. As no 4
6. Geology of Iceland. June 1 to 12. £495. Tour right round Iceland with geological guide, including famous waterfall hot springs, lava fields, glaciers, Skaftafell national park. Explorers' Travel Club, 85 Queen St. Maidenhead, Berks. SL6 1LR.

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Aldridge-Brownhills district plan 1981. This has been received, and members are welcome to consult it, via Paul Shilston,

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Field secretary, Anne Harrison, 67 Woodbourne, Norfolk Road, Edgbaston, Birmingham B15 3PJ. Tel. 021-454-6416.  
Hon. Sec. Paul Shilston, 16 St. Nicolas Gardens, Kings Norton, Birmingham B38 8TW. Tel. 021-459-3603.  
John Easter, Tel. Kingswinford 4916, will also give information about meetings,

Editor, Sheila Pitts, 4 Siskin Road, Pedmore, Stourbridge, West Midlands, DY9 7HU. Tel. Stourbridge 4107.

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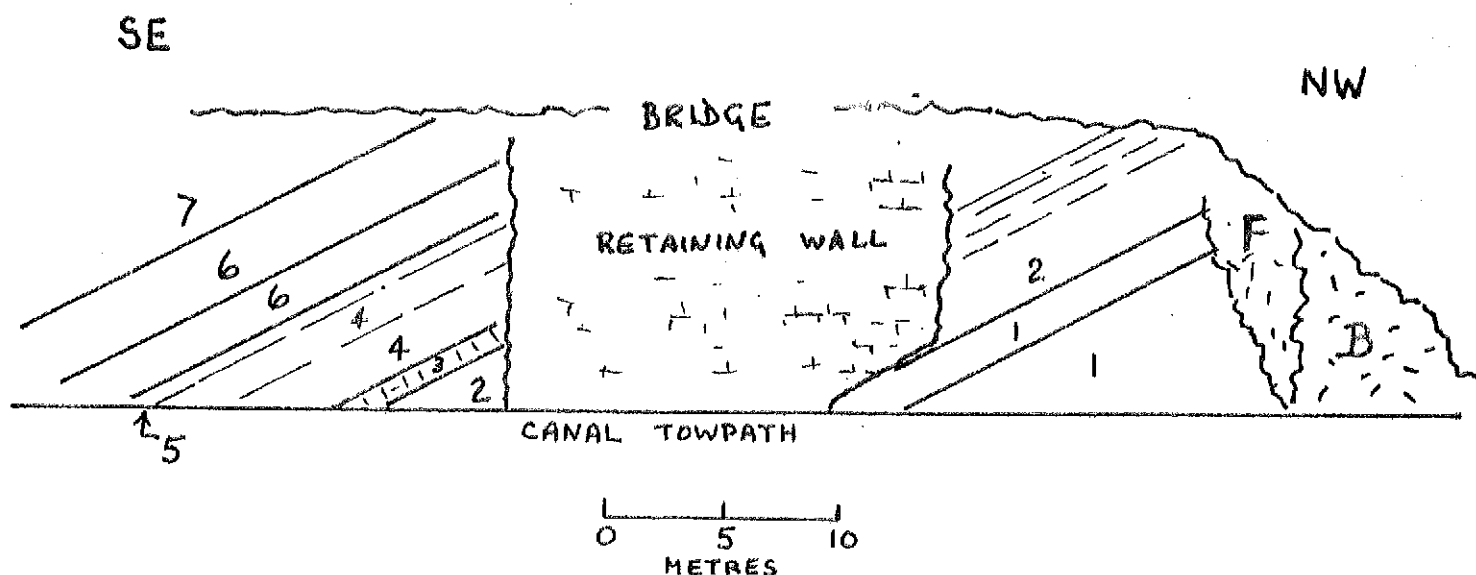
STOP PRESS :- Cotswold field trip. June 14th. Leader Mr. Walker, meet at Coaley Peak picnic site, grid ref. SO 792 011 at mid-day. Visit Rodborough Common, Selsley Common, Sandford's Knoll, Frocester Hill. All Middle Jurassic.

LOCAL GEOLOGICAL SITES.

2. CANAL CUTTING, BREWIN'S BRIDGE, NETHERTON.

Grid Ref: SO 936 876.

Location : Brewin's Bridge, Highbridge Road, near Netherton.



- B. Basalt/dolerite intrusion.
  - F. Fault zone.
  - 7. Coal measures, basement conglomerate.
  - 6. Red Downtonian, sandstones & mudstones.
  - 5. Bone bed - calcareous.
  - 4. Shales & mudstones.
  - 3. Sandstone.
  - 2. Marls, mudstones, shales.
  - 1. Downton castle sandstone.
- } Temeside shales.

**Description:** The major part of the exposure shows the Downton Series (Devonian Period) comprising Downton Castle Sandstone, Temeside Shales, and Red Downtonian Marls, which were laid down under deltaic or coastal conditions.

These are followed by the basement conglomerate of the Coal Measures.

At the NW end of the exposure there is a fault zone, followed by an intrusion of basalt/dolerite.