



NEWSLETTER No. 32 - APRIL 1982.

The Black Country Geological Society

Editorial.

Success story.

Our more long-standing members will know Graham Hickman, who has completed A-levels and a degree while a member of our society. I had last heard of him when he wrote while doing a vacation geology job in Oman, so asked him what had happened to him since. I was not in the least surprised to find that he now has a good honours degree and a good job in geology.

Graham has always been a particularly pleasant, interested, and hard working young man. He may be the first to have been a BCGS member throughout his geological studies, but with our increasing number of new members and their interest in all levels of geology, he is most unlikely to be the last. His letter is published on page three, and we enjoy his success and offer him our happiest congratulations.

Next Meeting.

April 5th. Informal Meeting two weeks before the field trip. John Easter will discuss the field trip. Member Adrian Collings, a professional geologist who trained at Leicester University, will give a tape - slide presentation about the eruption of Mount St.Helen's volcano.

April 18th.

Field trip to Whitwell Dolomite Plant and Cresswell Crags. Leader Mr.G.Plant. Take M1 to junction 30. At the roundabout there, take $\frac{3}{4}$ turn onto Worksop Rd. signposted Balborough. Wait in the first layby on the left. Please take packed lunch.

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

Non-members welcome.

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

Chairman

*A. Culler B.Sc., M.CAM.,
Dip.M., M.Inst.M.*

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F.I.E.E., M.I. Mech.E.*

Field Secretary

Anne Harrison B.Sc., M.B.

Programme.

April 23-25th. Weekend field trip to Dolgellau. Leader Mr. Graham Hall. For those staying at the Youth Hostel, the evening meal is at 7 pm. This will be followed by a lecture and slides. Mr. Hall will make the final decision but hopes to include his recent research into the relationship between volcanic centres and plate tectonics; Caledonian mineralisation; a visit to a slate mine to see various cleavage structures; and Cambrian sediments to see depositional structures. (See also Anne's article about further details of this trip on this page).

May 10th. "The Evolution of the Landscape of the West Midlands". Lecture by Dr. G. T. Warwick.

June 7th. Evening field trip.

June 21st. Evening field trip.

July 12th. Informal Meeting.

July 18th. Field trip to Derbyshire to see the Central Pennine Basin. Leader Peter Whithead.

September 13th. "Meteorites, building blocks for planets". Lecture by Dr. John Ashworth of Aston University.

October 4th. Informal Meeting.

October 10th. Joint field trip with Shropshire Geological Society to sites of interest in Shropshire.

November. To be arranged.

December 7th. "Glacial Deposits". Lecture by Mr. Edward Francis of Keele University.

Dolgellau Field Trip.

An approach map is included.

Meals have been booked for all those staying at the hostel. The Friday evening meal is at 7 pm. If you do not wish to take this meal, please inform Mrs. Margaret Hall at the Youth Hostel, Kings, Dolgellau, Gwynydd, LL 40 11TB. (Tel. 0341 422392)

Please inform her that you are a member of the BCGS.

Please bring a pillow case and two sheets or a sheet sleeping bag. A pillow and blankets will be provided. There will be an optional excursion into a slate mine. Helmets are required. Please bring your own as the society has only a few which can be rented.

Extra comment. There will be 36 people attending this field trip. This is the largest number we have ever had for a weekend trip. Our numbers have been swelled by a group from Shropshire Geological Society, and we are glad that they are able to join us.

You may recall that the closing date for application was February 14th. By mid-January I had received only four applications. In order to salvage the trip I invited the Shropshire members to join us. They responded quickly with the result that numbers rapidly grew.

We are very pleased that we have been able to extend our links with their society, and have been invited to join them on other projects (details in a future newsletter). However when our own members began to contact me a few days before (and after!) the closing date I was only just able to accommodate them. It would have been a pity if anyone had had to be refused a place.

Next year I hope to organise another weekend field trip. Would all BCGS members please book early to avoid disappointment. By booking early you would also spare your field secretary the worry she suffered this year. Cancellation is not only embarrassing to me but is also an insult to geologists who agree to spend a weekend leading the trip. They are always extremely knowledgeable and often give their services to the society free.

Anne Harrison,
Field Secretary.

Letter from Graham Hickman.

March 4th.

Dear Sheila,

Thank you for your letter, and I am sorry that I have not written before. I am now a BSc.Hon. for my efforts! I was very pleased to receive an upper second class degree in geology with geophysics when I left Leicester last June. Fortunately my final year went very well, apart from problems with my geophysics project. This was measuring the seismic velocity in rock samples of hand specimen size, and I had a lot of trouble making the equipment function properly. I really enjoyed my time at Leicester and was quite sorry to leave.

Over the summer I lived it up, and thought this was quite justified since it was my last long summer before becoming a "worker". I spent three weeks travelling around Europe on trains, as far north as the Norwegian Arctic and as far south as Italy. There were lots of good rocks, mostly metamorphic. Finally I spent two weeks in Scotland with four other friends from

university, touring the west coast in a hired minibus.

At present I am working for BP in London as a geophysicist, and my work involves mainly interpretation of seismic reflection sections and subsurface mapping. For the next two months I shall be on a seismic data processing course, where I shall use the computer to process seismic sections from the original field tapes. It is all good stuff! The only problem is that although I am working in geology, the only rock I see is my paperweight.

I would like to come on more BCGS field trips and to the meetings, but location and other commitments make this impossible. However I will continue to keep in contact and keep up my membership for many years to come.

I was fortunate soon after going to London, to be able to move into a house with some other young people. It is a very friendly and enjoyable place to live, and makes such a change from the grim underground commuting which I have to endure to get to and from work each day.

Best wishes from Graham.

October 11th.1981.

Black Country Classics. Field trip jointly with the Shropshire Geological Society. Leaders Alan Cutler and Colin Knipe.

This was the first joint meeting that the BCGS has held, and is all the more memorable since the Shropshire society has broadly similar aims and activities.

It was clearly impossible to do justice to Black Country geology in one day. Shropshire boasts many of the classic Palaeozoic sites whose names have become standards in the geological literature.

We thought that some of our less well known but equally classic sites would be appropriate on this first joint meeting.

Having met the visitors at the Allied Centre, we went up to Oakham to survey the Black Country and to point out some of the major features of relief. Sadly the high wind made hearing what was said quite difficult, so it had to be curtailed.

We moved on to Netherton, parking alongside the reservoir, and inspected the canal section SSSI at Highbridge where the coal measure conglomerate rests on denuded Red Downtonian beds. The dolerite intrusions at the opposite end of the section created much interest.

Upper Ludlow shales in the tramway cutting were next inspected, and it was some time before the characteristic fossils of *Camarotoechia* and *Chonetes* were uncovered. Here at Netherton the Ludlow beds cannot be divided into the two fold division as in the Welsh Borderlands. Bone bed fragments proved even more elusive than usual but some fragmentary plant remains were found, probably of *Pachytheca*.

We then walked down to Doulton's Claypit SSSI where many of the visitors commented on its impressiveness. Here the finest sections of the middle and lower coal measures on the eastern flank of the Netherton anticline are exposed. The claypit is now incorporated into the Saltwells Nature Reserve, and was worked from about 1870 for the valuable fireclays which occurred in the southern part of the Black Country. Although the lowest beds are now covered with infill it is still possible to recognise ironstones, coals, sandstones, shales and clays, thus demonstrating all the characteristic beds of the coal measures.

To round off the morning session we walked through the Saltwells wood, inspecting the "crowning in" of former workings, and on to the Pedmore Road site of the Dudley Enterprise Zone on the western side of the anticline. Here the famous Thick Coal was exposed for several weeks during the autumn, so visitors and members were afforded the nowadays rare view of the outcrop of this seam. No-one could quite understand the logic of building on this site without first opencasting such valuable fuel.

We rejoined the coach and travelled to the Park Inn at Woodsetton for lunch and the delights of the "Holden Golden"

Alan Cutler.

It is hoped to publish Colin's account of the afternoon trip to Wrens Nest later.

December 7th 1981.

The Geology of Antarctica.

Lecture by Professor Hawkes of Aston University.

This most interesting lecture included photographs taken by the speaker while on his own Antarctic research projects. These showed weather as well as geology, and the day to day life on a research base, such as unloading supplies from boats, flattening the snow to make a tent site, the previous use of huskies and the present use of skidoos. These motor vehicles are capable of 50mph. of plunging readily into crevasses, and of breaking down unlike the dogs. We saw photographs of the ships which make the one and a half day journey from South America, and the inflatable craft which are used for coastal studies. There is no helicopter support, and even the shipping is now under threat of cancellation despite evidence of oil in the Weddell Sea area,

and the presence of the Falkland Islands population. Territorial claims, disputes, sectors, scientific bases were all described, and the possibility of towing tabular icebergs far afield as a source of fresh water.

A main feature of Antarctica is the Ross-Weddell Sea depression, which divides the smaller Andean type western part from the Precambrian eastern plateau. Most of the eastern plateau bedrock is below sea level, and below 2000 m. of ice. It is of 3000 m.y. old gneisses, with about four Precambrian orogenic belts. The Ross orogeny to the west of Caledonian age, with granite intrusions, then further west is a belt of Hercynian age related to South Africa. The Andean belt further west still is of Alpine age.

Like the Andes, the mountains of the western peninsula are little deformed, but have been subjected to uplift, and have huge 2000 feet fault planes. The pyritisation of the Jurassic volcanics suggests economic mineralisation at depth, but sampling is difficult in the remote ice covered terrain. The west has active volcanoes, and the area of Professor Wakes own research on Deception Island was blown up 18 years later.

Eastern Antarctica matches up with the Precambrian banded iron ores of Australia, and base metals are likely to be similar. Andean type mineralisation was to be expected in the west, and three years ago an Aston University expedition spent five months there, with helicopter support for sampling. This was directed more towards research into theories of mineralisation than towards economic discovery. There was much evidence of copper and molybdenum mineralisation.

The South Shetland trench subduction zone continues right down the peninsula so the metallogenic zones should be similar, but there are large transform faults, and the zone subduction age was not the same throughout, so this would vary the mineralisation zone distribution. Fracture zones probably concentrate the mineralising fluids, and there is one volcano producing almost pure iron ore. Recent oceanography has shown that ocean floor hydrothermal springs do concentrate metals especially near fracture zones.

The last part of the lecture concerned life forms. Mosses, lichens and kelp are common, but no more advanced plants. Fauna are more extensive, and whale and seal economic history was described. We were told with some feeling that bull seals and skuas have a profound dislike of geologists. Cormorants and Adélie penguins were regarded with more affection.

This most unusual evening about a fascinating far away place clearly gave great interest to the audience, and especially to your editor, who was recently thwarted from boarding a ship for Antarctica only a day or two beforehand.

Sheila Pitts.

December 2nd.

Art Minister's Visit.

Paul Channon, Minister for the Arts, visited Dudley at the invitation of John Blackburn, M.P. for Dudley West. The purpose of the visit was to persuade the minister that Dudley could use government financial help for many of its cultural activities including the idea of providing a fossil area at the Black Country Museum.

The minister's somewhat hectic tour included the Black Country Museum, Broadfield House Glass Museum, the Brooke Robinson collection, the Geological collection, and the Art Gallery in St. James Road.

At St. James Road he was met by Charles Magilamack who conducted the V.I.P. party around the Art Gallery and Brooke Robinson collection, BCGS Chairman Alan Cutler's help was enlisted. The minister showed a keen interest in the historical aspects of the collection, and the work that the society had undertaken. Unfortunately the geological tour lasted only about ten minutes, but judging by a subsequent press report, the fossil collection seems the only subject singled out by the minister for possible future help. However knowing the speed at which local government machinery works it may well be years before the geological collection assumes its proper place once again.

Alan Cutler.

Geology Courses.

1. Minerals rocks and fossils. Oct.22-24. £43. Losehill Hall, Castleton, Derbyshire, S30 2WB.
2. As above, July 24-31. £109.
3. As above, Caves of the Peak District. Nov.19-21. £45.
4. University of Leicester, Vaughan College, St. Nicholas Circle, Leicester.
 - a) Snowdonia's Geology and Scenery. July 10-17. £110.
 - b) Geology of Skye. Aug.14-28. £25 per week, plus transport plus accommodation.
5. University of Bristol, 32 Tyndalls Park Road. Bristol. BS8 1KR.
 - a) Dorset Coast. DB1 C08 SJ. Field meeting April 25th. £2.40.
 - b) Isle of Man. B81 903 RH1. Sept. 4-11 £100 approx.

Committee Meetings.

<u>General.</u>	<u>Conservation.</u>
April 19.	May 17.
June 28.	Jul. 19.
Sept. 6.	Sept. 27.
Nov. 8.	Nov. 22.

Welcome to New Members.

- Graham Worton - Netherton.
- Audrey Ronan - Moseley.
- Belwyn Day - Northfield.
- Tristram Besterman - Warwick.
- George and Pat Fairhurst - Brierley Hill.

Hon. Sec. Paul Shilston, 15 St. Nicholas Gardens, Kings Norton, Birmingham B38 8TW. Tel. 021-459-3603.

Field Sec. Anne Harrison, 15 Duncombe Grove, Harborne, Birmingham, 16. Tel. 021-454-6416.

John Easter, 27, Fairlawn Drive, Kingswinford, DY69PE. Tel. Kingswinford 4916.

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

AYNUK and AYLI FROM EXPRESS STAR by Paul Sellers



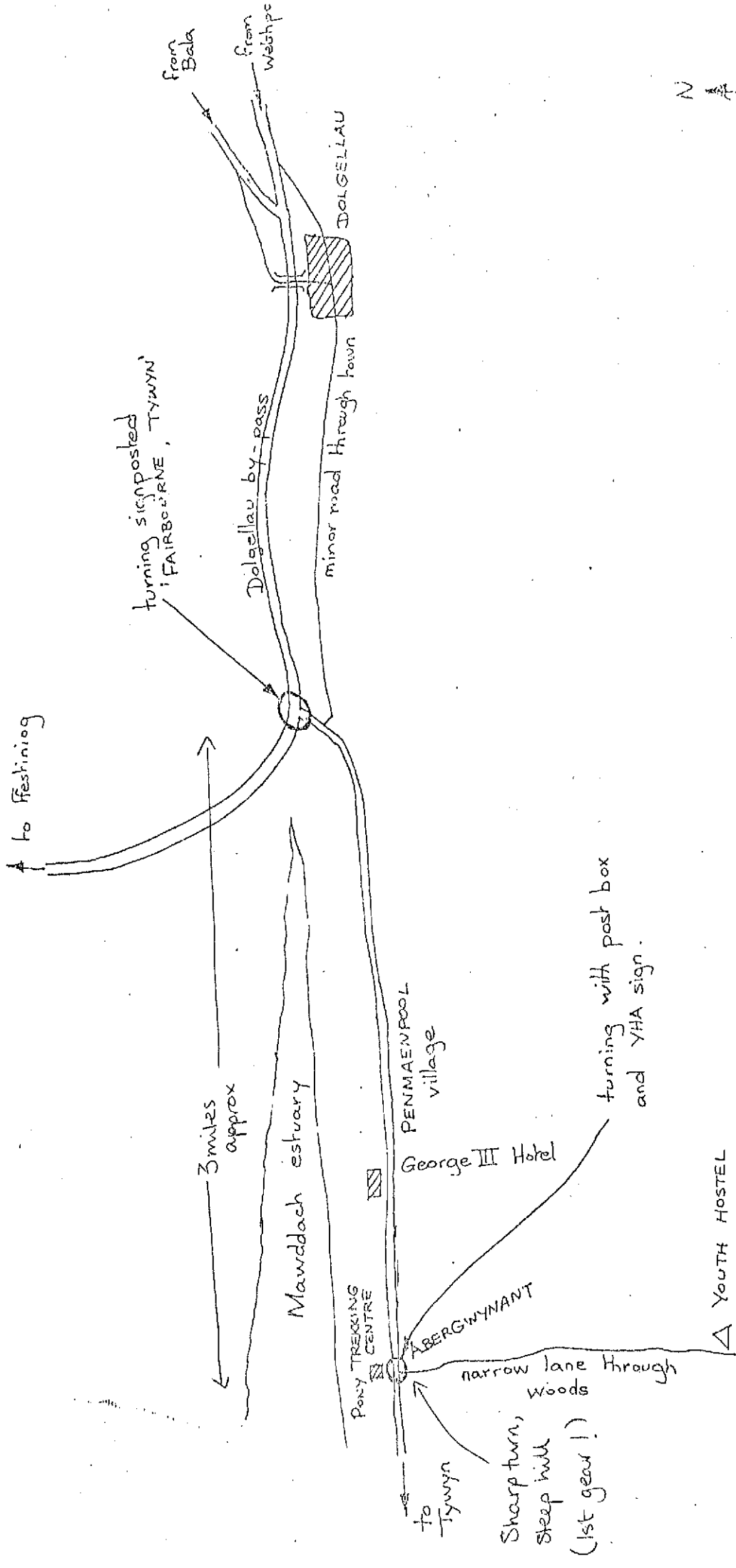
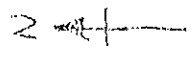
SHROPSHIRE GEOLOGICAL SOCIETY - MAPPING PROJECT.

The Shropshire Geol. Soc. invites any interested members of the B.C.G.S. to join them on mapping trips.

Dates. June 9, 23 and 30th. 7-7.30pm start, for about 2 hours, then on to a local pub.

Venue. Ercall Quarry. OS sheet 127. Grid Ref: 643 095.

Aims. To produce a booklet which can be used as a teaching aid.



Notes regarding the visit to
Whitwell Works
of Steetley Minerals Ltd. and
Creswell Crags Archaeological
Caves and Rock Shelters

The recommended route is Northwards on the M1 and should take about 2 hours by car.

While on the Motorway notice the escarpment on right after passing Nottingham. This was the edge of the Zechstein Sea with which the Permian Limestone we shall be visiting is associated. Dolsover Castle lies on the ridge of the escarpment.

To the west of the ridge lie the Carboniferous Coal Measures.

Leave the Motorway at Junction 30, when reaching the island at the top of the exit slipway take the third exit to Worksop. Near the island is a large layby capable of taking about 12 cars. We shall meet here by no later than 11 O'clock for a short talk by Gerald Plant of Steetley. The layby is a suitable place to outline the topography, as it lies close to a major fault complex. This shears the Permian beds and affects the formation of the Gorges. Afterwards we shall drive to the Whitwell Works for coffee and a short description of the plant. Then we shall go to the quarry which has a fault line and illustrates the Upper and Lower Magnesian Limestone. The quarry is dry, but suitable footgear is recommended if it has been raining. We shall also need hard hats, some of which will be available from the society on loan at 10p each.

We aim to leave the quarry at 1.30 p.m. and arrive at the Visitors Centre at Creswell Crags at 2.00 p.m. At the centre there is an exhibition and there will be somewhere available for us to eat our packed lunches.

At 2.30 p.m. we shall be met by Rogan Jenkinson who will conduct us around the caves. As they are under scientific research, these caves are normally kept locked and the general public are not admitted. Since about 10,000 years ago these Creswell Crags have been intermittently occupied by prehistoric man and animals.

The walk should finish at 4 O'clock and we should be clear of the Crags by 4.30 p.m.

It is hoped that the visits should illustrate how man has used limestone in the past and present.

Finally, some idea of the numbers proposing to go on the trip has been requested and therefore it would be appreciated if those proposing to go contact John Easter at 27, Fairlawn Drive, Kingswinford, West Midlands DY6 9PE or telephone Kingswinford 4916.