# The Black Country Geological Society

NEWSLETTER No. 75. June, 1989:

Meetings are held at The Saracen's Head, Stone Street, Dudley 7.30 for 8 o'clock.

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 arrange their own insurance as a matter of course.

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Forthcoming meetings:

Monday: 19th June: Evening field trip to Uffmoor Wood, near Halesowen. Woodland, wildlife and geology. Meet 7 p.m. in the car park, Uffmoor Lane, off the A456 road near Halesowen - grid reference 950 815. Leader Alan Cutler.
Uffmoor wood is an ancient woodland now owned and managed by the Woodland Trust. The wood is crossed by two streams which expose interesting geological strata.

Monday: 3rd July: Barbecue at Oldswinford Hospital, Stourbridge. Details and booking form are again attached to this newsletter. Please send your money to Judith Shilston as soon as possible and before the closing date of Friday 16th June. Places are selling fast. We shall have a wide variety of live music to cater for all musical tastes and good food to taste from all the caterers! The event takes place in the grounds of Hanbury House at Oldswinford Hospital School. Directions:- leave Stourbridge ring road left along Worcester Street and after 50 yards take the first left along Chapel Street and immediate first right up Hanbury Hill. Take the second left and the house is on the corner on the left. The event starts at 7.30 p.m.


King Road = New Road

Sunday: 17th September: Field Meeting Warwickshire. Southam Quarry and Burton Dassett Hills. Leader - John Crossling, Keeper of Geology at Warwickshire Museum. Meet 10 a.m. at the Market Place, Warwick at the rear of the Warwickshire Museum. The meeting will start with a short tour of the museum and an introduction to Warwickshire geology. Southam quarry is a few miles east of Warwick and is in the Blue Lias (Lower Lias). Its interbedded limestones and clays are worked for cement.
Burton Dassett Hills are Middle Lias and include the Marlstone Rock bed, a ferruginous limestone which forms a distinctive outcrop due to its relevant hardness. It was quarried in the area for iron making.
John Crossling promises that both sites are VERY GOOD for COLLECTING FOSSILS.

Monday: 2nd October: Lecture by Dr. Ken Addison "The Age and Nature of Glaciation in North Wales: a modern Interpretation."
North Wales and its glaciation has always interested geologists and it is a classic area where the ideas of glaciation were first worked out by geologists in the last century. Dr. Addison has studied the area in detail and his lecture will describe the latest thinking on the subject.
Dr. Addison is senior lecturer at St. Peter's College, Oxford and at Wolverhampton Polytechnic. He has worked extensively in the glaciers and icefields of Alaska, Norway and Switzerland, and has made a special study of glaciation in North Wales.

Sunday: 29th October: Field Meeting to the Wrekin. Leader: Dr. Alan Wright of Birmingham University. Meet 10.30 a.m. at the entrance to the old quarries at Buckatree Glen opposite Buckatree Hotel on the west side of the Ercall. To get there, leave the M54 at its end (exit 7), turn left, then sharp left at the Forest Glen cafe.
The Wrekin-Ercall area is one of the international sections for the boundary between the Precambrian and Cambrian. Dr. Wright has been working on this boundary and is publishing a paper on his results. He will be able to update members on his findings.

Monday: 4th December: Lecture on gold. "Very precious metals in the British Isles" by R. Ixer of Birmingham University.

January, 1990: Lecture by Spencer Mather "Minerals and their environment in Southern Norway".
Spencer comes from the West Midlands, but has spent over 20 years as a mining engineer/ geologist in Norway. He has an extensive mineral collection, and has also written a textbook (for the Norwegians) on Norway's mineralogy.

February, 1990: A.G.M. followed by an illustrated talk "Geology in Kenya" by Sheila Pitts. This will describe her recent visit to Kenya.

March, 1990: Lecture "Geology and Mineralogy of the Caldbeck Fells in Cumbria" by Dr. R.J. King, Curator of the John Moore Museum, Tewkesbury, formerly of the National Museum of Wales.

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Editorial:

We hear and see so much about the forthcoming National Curriculum. What of geology in schools? Still existing as a minority optional subject but also making its appearance amongst the broad range of topics included in the "balanced science" curriculum. For the first time the "pure sciences" have been directed to include not only earth science but environmental sciences in their lower and upper secondary school curricula. Topics include rock structures, rock formation, land forms, vulcanism, plate tectonics, fossils and geological time.
The benefits to geology could be substantial as every student will encounter some aspect of geological science in his or her school career as opposed to the present small minority and geology will have an established slot amongst the other sciences, thereby giving it improved status. Maybe we shall see some pure science teachers at our lectures and field meetings. I hope so!
Until now geology in schools has been very much an addition to geography departments but the future may see a blurring of the boundaries between geography, geology and the pure sciences.

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Monday 13th February: Yellowstone and Yosemite - Two Great National Parks - by Paul Shilston:
The USA has many National Parks with a

geological background, and the ones described in this talk are two of the most interesting.
YELLOWSTONE is sited on one of the Earth's "hot-spots" and has a great range of geothermal features, geysers, hot springs, fumaroles and mud pots. When early explorers brought back stories of these amazing sights people scarcely believed them, but eventually a US survey party under the geologist Ferdinand Hayden confirmed their existence and in 1872 Yellowstone was declared a National Park - the first in the USA, in fact the first in the world.
All the geothermal features have their origin in the active source of heat relatively near the earth's surface, but they take several forms, such as:-
*hot springs, where hot or boiling water flows continuously.
*mud pots, where there is not enough water for a hot spring.
*geysers, which are quiet and then explode with steam and boiling water at regular intervals.
*fumaroles, which emit only gas or vapour.
The talk showed examples of all these, though of course the geysers were the most spectacular. Best of all was Grand Geyser (aptly named) which erupts 200 feet into the air, and lasts for over 15 minutes.
Other spectacular features of Yellowstone include the Mammoth Terraces which are a series of travertine pools and terraces formed by hot lime-rich water springs reaching the surface and evaporating.
YOSEMITE is quite different - it consists almost entirely of masses of granite in the form of plutons, which were formed deep underground about 80 million years ago. There are some 100 separate plutons, and with the average pluton size around 10 square miles, they virtually fill the area.
As the country rock above the granite was eroded, the reduction of pressure caused the granite to separate into layers, rather like onion-skin weathering, and this finally led to the dome-shaped mountains now so characteristic of Yosemite.
Glaciation during the ice age scoured the surfaces of the granite masses, and there has not been enough time since for vegetation to gain a hold, so the impression of Yosemite is of a whole landscape of these rounded, bare granite domes.
The talk showed and described these features - then ended with an ascent of Half-Dome, the most spectacular sight in a spectacular area.

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Quaternary Research Association visit to Dudley, Thursday 6th April, 1989:
One memorable week this Spring saw not only the Murchison Symposium's historical outing to Dudley, but also a visit to the borough by the Quaternary Research Association durin its 25th anniversary field meeting. The party,comprising some sixty Quaternary specialists from all over Britain, was led by Professor Coope of Birmingham University and Dr. Horton of the BGS.
Two stops were made in the borough, the firs on top of Mucklow Hill, Quinton, on the Halesowen side of the M5 (SO992 847), the second at the site of the old sand pit near the River Stour at Amblecote (SO895 855).
The Quinton site, previously unknown to members of BCGS, is one of the most important Pleistocene sites in the West Midlands. There are no visible exposures, but deposits were proved during site investigation for the M5 motorway c1970, and further excavations and mapping were carried out by the BGS soon afterwards. Two continuously sampled boreholes were also sunk to examine the sequence.
The results of this research have only been published this April - in the West Midlands Field Guide produced for the QRA meeting.
The importance of the Quinton site is that three Pleistocene deposits are recorded, two glacial, with an intervening interglacial one. The latter comprises silts and clays with abundant plant debris and has bee dated Hoxnian in age. This Hoxnian material was deposited by a river whose incised 'V'-shaped channel cut down into the older underlying glacial deposits and the Halesowe Beds of the Carboniferous beneath.
The Quinton sequence apparently contradicts the interpretation of sequences found elsewhere*by the QRA at its April meeting, although it was conceded that at least three cored boreholes, each 120' deep, are needed to help to elucidate the sequence. It was suggested in the field that Dudley should co-operate in this venture, but it is unlikely that the borough would fund such a project on the basis of scientific research, no matter how noble the cause.
At the Amblecote site, opened for the occasion by its owners, West Midland Gas, Professor Coope, oblivious to the incessant rain, regaled on the excavations by Professor Botton early this century. These

*in the Birmingham area. This was one of the major problems discussed

excavations produced numerous mammalian teeth and bones, including those of mammoth, wooly rhinoceras, bison, large deer - all tundra-dwelling animals, together with those of hippopotamus, which are indicative of warm, interglacial, Mediterranean-type climate. The hippo remains pin-point the Stourbridge gravels as being of Ipswichian age, two stages above the Quinton river deposits.
Taking the Quinton and Stourbridge sites together, Professor Coope was at pains to point out that while rivers flowed at a level equivalent to that a the top of Mucklow Hill (O.D. 700') in Hoxnian, by the Ipswichian, they had cut their way down through 500' of drift and Carboniferous rocks to the level of the Stourbridge terrace - an enormous amount of erosion, bearing in mind that virtually no further downcutting has taken place since the Ipswichian - 120,000 years ago.
The enigma of the Quinton and Stourbridge sites will undoubtedly be the source of controversy and investigation for some time to come. In the meantime, the West Midlands Field Guide can be obtained from its editor Dr. D. H. Keen of Coventry Polytechnic at a modest price of £5.00.

Colin Reid:

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Monday 16th January, 1989: Lecture - "A Mineral Hunter in Ireland" by Colin Reid (Keeper of Geology, Dudley Museum and Art Gallery).
There are two kinds of mineral hunter - the rockhound, or amateur collector, and the professional exploration geologist. Colin began as the first and went on to be the second before being appointed geology curator at Dudley. In this detailed and wide-ranging talk, Colin gave an in-depth account of the mineral exploration business in his native Ireland.
Until the 1960's Ireland was thought to be virtually devoid of economically viable mineral deposits. Ironically enough it was not an exploration geologist who discovered Europe's large base metal deposit under the fields of County Meath, but a workman digging a hole for a telegraph pole! The site at Navan now produces 2.5 million tons of zinc ore a year and the ore body will not be exhausted for another 30 years.
Success in base metal exploration at Navan, Silvermines, Tynagh and several other sites sparked off a major exploration boom in Ireland and numerous small companies have sprung up over the past ten years, explorin for gold, platinum, uranium and other minerals. Colin spent many months panning for gold in the Mourne Mountains of County Down and explained how a panning programme was carried out. The idea is not to find a large amount in the streams but to attempt trace the area where the gold remains in the bedrock. This method proved very successful in Gortin, Co. Tyrone where a gold mine owne by Ennex International is now in operation. Unfortunately because of the "Troubles", explosives cannot be used, and drilling is the rule of the day.
Colin also described how he explored for coa in the small (1mile square) Coalisland coalfield in County Tyrone. The coal (up to 9' thick) had been worked here for many centuri but because of the nature of "bell-pit" mining up to 70% of the coal remained. No exploration was carried out after Colin's initial report. He later realised that the main reason for his report was to boost shar prices, and swell the coffers of the company directors! The company he worked for ceased operations in N. Ireland without sinking a single borehole, yet shares rose from 10p to over one pound each!
Colin's lecture finished with a brief discussion of some of the best mineral localities in Northern Ireland for zeolites and semi-precious stones, followed by an "excursion" up the Antrim Coast Road. His final slide was of the "Giants Seat" at the Giants Causeway - conveniently close to the famous Bushmills Whiskey Distillery which is always a stopping point on geological excursions to the Antrim Coast. Perhaps the Giants Causeway should be a venue for a futu Society field-trip!

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BCGS News:

Moon to Mars Exhibition:
Dudley Museum will be holding an exhibition in the Summer (1st July-12th August) entitle "From Moon to Mars", covering manned Space Exploration from 1969 - 2009. The exhibition is based around an Area Museum Service exhibition on "The Apollo Missions". Moon rock meteorites and tektites will be included among the displays. There will also be a lecture series by space experts such as Tim Furness, the BBC Space Correspondent ("The Apollo Crews and Training"), Dave Shayler ("Apollo II"), Dave Hardy ("Space Explora-

tion - an artists perspective") and Phil Clarke ("The Russian Space Programme"). The exhibition will be opened on 30th June by the astronomer Heather Couper and will climax with a special evening on 21st July to celebrate the 20th anniversary of the first moon landing. For more details or tickets for the lecture series, contact Colin Reid at Dudley Museum (Tel: 453574).

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New texts on Sedimentology:

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| Techniques in Sedimentology | £24.95. |
| Sedimentary Environments and facies | £21.00. |
| Theory of the Earth | £35.95. |
| Basic Analysis | £20.00. |
| Carbonate Sedimentology | £20.00. |

(both late 1989)
all from Blackwell Scientific Publications Ltd. Osney Mead, Oxford OX2 OEL.

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Medway Mineral and Fossil Fair sponsored by Medway Lapidary and Mineral Society (0795 77745). Sat. 24th June in Upstairs Community Hall, Hempstead Valley Shopping Centre, Gillingham, 10am - 5 pm. Admission 50p, children half price. Free parking (Exit 4 on the M2).

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New leaflet from Dudley MBC Leisure Services "Exploring the Past" - an introduction to the rocks and fossils of the Dudley Area.
A beautifully presented, illustrated leaflet giving details of the following Black Country sites - Wrens Nest, Holloway St. Quarry, Gornal, Doulton's Claypit/Saltwells nature reserve, Rowley Hills and Barrow Hill, The Ridge, Wordsley, Cotwall End Valley, Mucklow Hill and the Stour Valley. It includes a map and details of wardens telephone numbers. Available free from Dudley information centres, museum & library.

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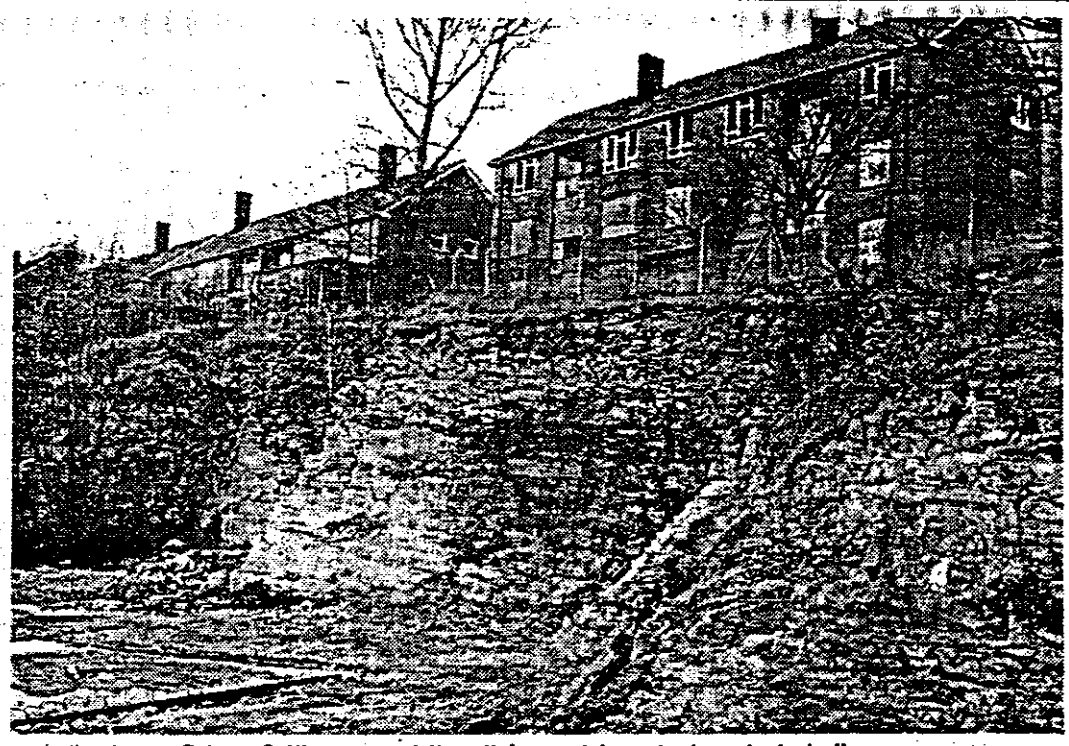
FROM THE PAPERS:

Birmingham Evening Mail

# Bid to protect fossils quarry



Rubery Cutting: one of the city's most important geological sites.

A 300-million-year-old rock face sandwiched between derelict flats and a row of houses is to become one of Birmingham's first Local Nature Reserves.

Rubery Cutting, also known as Leach Green Quarry, is considered one of the city's most important geological sites by the Nature Conservancy Council.

Now Mr Derek Brown, the city's conservation officer, has steered proposals to turn the cutting into a reserve through council committees and only awaits final approval from the full council. Five other sites around the city are awaiting the same approval.

The rock face was exposed by quarrying work and consists of Rubery sandstone laid down in the Silurian period when the West Midlands lay underneath warm shallow seas.

It contains numerous fossils of prehistoric animals including corals, trilobites and brachiopods.

Designation as a local nature reserve means it is protected from developers or any other kind of destructive disturbance.

Birmingham already has a number of nature reserves in areas such as Sutton Park which have been declared Sites of Special Scientific Interest by the Nature Conservancy Council.

The "local" designation is aimed at protecting sites which are not so important as SSSIs but which have regional or local significance.

Mr Brown said: "I hope the cutting will become an important resource for schools. The creation of these reserves is an important step in the conservation strategy which the city has devised over the past few years."

One of the other sites is Moseley Bog, a 23-acre wetland three miles from the city centre.

It was threatened by a building development in 1980 but local residents mounted a successful campaign to save it.

The bog, along with the nearby Dell, is used extensively by schools for nature study.

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