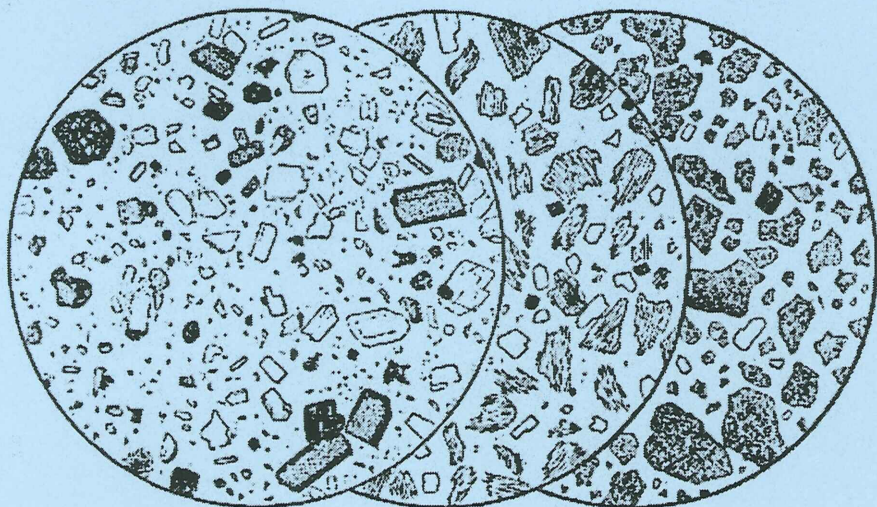


CHARNIA

LEICESTER
LITERARY & PHILOSOPHICAL SOCIETY



THE NEWSLETTER OF SECTION C
(GEOLOGY)

FEBRUARY 2001 EDITION

EDITORIAL

The wonderfully sunny days we had for our field excursions last Summer seem as far away as the ones we wish for during the coming season. Winter without Section C lectures would be well nigh unbearable! This copy of 'Charnia' reaches you a little later than usual, for no good reason really, other than the usual colds and 'flu slowing things down. There is actually another reason for the apparent tardiness in that copy for our little magazine-cum-newsletter has been slow to appear! If readers have anything they would like to share please send it to me in good time either by ordinary mail or e-mail. The e-mail address is: graham.stocks@lineone.net

Which brings me to the next point: the e-mail facility is due to the generous gift of Pete and Helen Blake, who have recently replaced their computer. That is, they very kindly passed on their old computer to me. Although the Autumn Edition of 'Charnia' was a Rolls-Royce job compared with previous issues, it was still a physical photocopy, cut-and-paste effort. This edition has been produced electronically and remotely. The University's in-house printers take computer files and collate pages according to the format we prescribe. This has the added advantage of being less costly to produce, which should keep Doug Lazenbury happy!

Being cut-and-paste, the previous edition of 'Charnia' usually takes up a lot of table-space at home. If a draught blows, you can easily lose copy - which is precisely what happened! 'L' to 'Q' of the frivolous 'Some geological terms redefined' was found under the table after I had taken what I thought was a complete 'Charnia' to the printers. Did anyone notice? In case you did and you really do want to see what was missing, here it is:-

Laccolith: To come away from a field visit with not a single specimen.

Molasse: The accumulation of Oxford Clay which collects on the soles of boots, raising the owner's height by several inches.

Nummulite: The waves of somnolent anaesthesia experienced towards the end of a memorably tedious lecture.

Ostracod: The one who doesn't stand his round at the bar.

Porphyroblastic: A temporary mental incapacity and somewhat more severe form of horst (q.v.). See also 'vulcanism'.

Quaternary: recent unconsolidated deposits which frequently obscure the really interesting exposures.

It's difficult to be upbeat with the dreadful earthquake news from Gujarat and Kutch. It is nearly fifty years since the last earthquake disaster in that region. It seems likely that the same complacency about building standards, as was the case in Turkey last year, is about to hit the news. The same applied to the El Salvador quake earlier this month. Nearer to home we build on floodplains and washlands and then wonder why we have to suffer devastation. There are many parallels between the Ahmedabad disaster and that of Mexico City in 1985. There are approximately twenty earthquakes of Richter Magnitude 7 or greater per year. Already this year there have been five, three of which were in relatively uninhabited regions: Kodiak Island, Vanuatu and Mindanao. Collapsing buildings kill and injure people, not earthquakes.

On a lighter note, other news includes the naming of a dinosaur species after Mark Knopfler, *Masiakasaurus knopfleri*. Reconstruction shows the beast (the dinosaur, not the artiste) to have been the size of a large dog, with peculiar dentition. The foremost teeth look as if they were used to trap and pin-down small prey, rather in the same manner that gharials and caymans predate fish. Why Knopfler? The University of Utah group listened to his music while digging. I think there's scope here for a lot of humour - what if they had been listening to T. Rex or Grateful Dead? Oh, go on, I'm sure you can think of more!

Finally, thanks to Professor Gabriel Dover for allowing us to use quotes from his book 'Dear Mr. Darwin' (Weidenfield & Nicolson, ISBN 0-297-84259-5). Thanks also to 'Family Tree Magazine' and Amy Cockett for allowing me to relate the account of the coprolite miners.

GS



"USE NEWSPAPER FOR PROTECTION IN TRANSIT"

MEMBER'S EVENING 14TH FEBRUARY 2001

Our annual Member's Evening will take place as usual in the New Walk Museum on February 14th. This is something of a 'hidden gem' in our programme, and we would like to see more of you in attendance, as it always turns out to be a most enjoyable occasion. For those who are not familiar with the format of the evening, it consists of members giving short informal 10 or 15 minute chats to the audience on an aspect of their geological interests. The palette is intentionally very broad, so that if you simply wanted to show your holiday snaps of landscapes or seascapes with a geology-based commentary, this is just as valid as a taxonomic exposition on a brand new fossil you've found. As long as there's a bit of geology in there somewhere, anything goes. And if the idea of talking to an audience frightens you (it shouldn't, it's all very laid-back), you can bring along your prize specs and show those off or seek the other member's opinions on unknown pieces. Or just chat, after all the old name for this meeting was 'Conversazione evening'!

PROVISIONAL SUMMER EXCURSION PROGRAMME 2001

MAY

Sunday 27th

Geology of the Cleeve Hill (Cotswolds) area. This will involve a 5-6 mile geological ramble around the hill area looking at newly restored faces in the 'Inferior Oolite' (Middle Jurassic).

Leader: Mark Barron (British Geological Survey).

JUNE/JULY

Friday 22nd - Sunday 24th

Geology of the Whitby - Scarborough coastline. The weekend excursion this year will be to another classic area. Leaders will be Mike Romano and Martin Whyte from Sheffield Univ. Book early with Dennis (0794 7725361) to avoid disappointment!

We should also be able to offer a day excursion towards the end of July (w/e of 20th/21st or 27th/28th), and will give details in the next Charnia, which will be out in May.

AUGUST

Saturday 18th or Sunday 19th

Shadwell Quarry, near Much Wenlock, Shropshire. Very fossiliferous Lower Elton Formation shales, also Wenlock Limestone (Silurian). Another quarry may be visited in the afternoon. Leader: Dr Gary Mullins (Geology Dept., Leicester University).

SEPTEMBER

Sunday 16th

Hunstanton, Norfolk. Varied deposits of the Chalk (Cretaceous), and associated strata.

Leader: Dr Roy Clements (Geology Dept., Leicester University).

OCTOBER

Saturday 16th

The British Geological Survey collections, Keyworth, Notts. See the splendid and important collections at the headquarters of British geology, which are not normally on show to the public. Meet at Keyworth at 10.30 am.

Host: Dr Mike Howe (Chief Curator, British Geological Survey).

Details of each excursion and directions will be circulated to members approximately 1 month before each trip. A booking form will be attached. More information or queries - Dennis Gamble (0794 7725361) or Joanne Norris (0116 2833127).



Penarth Group overlain by Lias Group (Tr - J), cliffs near Penarth

EXCURSION TO STEWARTBY, BEDFORDSHIREAugust 20th 2000

Our leader for the excursion to Quest Pit (Stewartby), near Bedford, was Chris Andrew, Curator of Bedford Museum and Section member. It was a fine sunny day as Chris greeted the 17 member party, and indeed we were very lucky with the weather in the year 2000, and picked some nice dry days for our trips. Chris distributed handouts before explaining the Lower Oxford Clay geology and the workings of the pit. He also brought along for our perusal a fine selection of fossils that had been found on this and nearby sites. These specimens were mainly of marine reptile and crocodile bones, with some examples of bivalves and belemnites. Only the north end of the pit is worked, using a large bucket and line excavator. The south end is disused and has become overgrown with vegetation, and supports some particularly venomous thistles, as all who went to look at that end will testify.

The pit yielded some very nice specimens of *Gryphea* and the belemnite *Cylindroteuthis* and members were also rewarded with good specimens of bivalves and gastropods from the nodules of a distinctive horizon known as Bed 8B. Ammonites were plentiful but their pyritic preservation precluded collection. One very interesting find was a fin spine from the fish *Hybodus* which was found in a delicate state of preservation, but was reportedly later reassembled to create a very impressive specimen. By late afternoon, we had exhausted the pleasures of the pit, so decided to call it a day. We thanked Chris for leading the trip and being on hand to answer all our questions.

Post script. Lucky with the weather? Just a few hours later there was an almighty thunderstorm!

Dennis Gamble

VISIT TO THE NATURAL HISTORY MUSEUM, LONDONSaturday September 30th 2000

In concordance with our now usual practice of ending the summer field programme with a museum visit, we at last, inevitably, found

our way to the Natural History Museum in London, the gem in the crown of Britains natural history museums. I should say we found our way eventually - as we were caught in a tangled web of late running trains, including the one on which the party had reserved seats. Normally restrained members were heard to be muttering 'oh dear' or similar words and the atmosphere began to resemble a world environment meeting. However, after some negotiation we were shoehorned onto a three carriage unit which eventually was crammed with the equivalent payload of a train three times its size by the time London was reached. The stuffy, nauseous tube seemed almost a relief as we wove our way through more disruptive diversions to reach South Kensington. But at last we were there before that magnificent frontage.

We were soon met by our host, who was no less than Steve Donovan, the Chief Palaeontologist at the museum. Nothing like having the top man to show you round! The group, now swollen to 17 by three guests, was then taken on a privileged tour behind the scenes through acres of anonymous storerooms and identical racking containing 100's of thousands of specimens, which to 'normal' folk might seem to be akin to purgatory, but which to palaeontologists of course, was Mecca. Steve had sorted out a selection of tasty goodies for us, which appeared at regular intervals, but the overwhelming impression we all had was one of frustration that we couldn't see everything. Knowing that somewhere in that maze was the actual specimen to which we'd compared our paltry and incomplete finds, was extremely tantalising. Still, Mecca or not, there were some fairly footsore members by the time we emerged again into the main museum, having given our profuse thanks to Steve for giving up a priceless Saturday to show the mob from the provinces around his charge.

We were then free to explore the museum proper, which occupied the next two hours. Several of us were on geology overload by then, so headed for the other exhibits and the bookshops. By three thirty most people were in need of stimulating refreshment, so we took ourselves off back to the St Pancras area and tracked down a pub where weary bodies could be restored. Thankfully, the return train to Leicester ran without a hitch, and permitted a leisurely recapitulation of the day's events, or 40 winks as it's better known.

Andrew Swift

FIELD TRIP TO BARDON QUARRY, September 10th 2000

Nine members of the Society, 11 members of the Warwickshire Geological Conservation Group, plus two guests, all met at the Quality Control Lab of Bardon Quarry. The building which houses the lab was once Bardon Primary School. The school was rebuilt on a site nearly a mile away, as a result of the expansion of quarrying operations.

The visiting group was taken deep into the large quarry by Land Rover, where John Carney of the British Geological Survey demonstrated recent interpretations of the complex geology of the area. John showed the relationships between the dacites and the various types of dacite breccia, known as the Bardon Breccia. An interpretation of the formation of the origin of the rocks was offered. It was suggested that the dacite was emplaced in the form of a cryptodome beneath the wet sediments of the Bradgate Formation. John prepared extensive notes and diagrams that proved to be of great value in visualising the cryptodome.

The relationship between the Charnian rocks and the overlying Triassic rocks was discussed. Steep-sided gullies were observed to be running off the hill. These could be interpreted as desert flash-flood gullies rather than the less-steep and wider wadis that can be observed at Newhurst and other quarries. The unconformable contact between the Triassic Mercian Mudstone and the Charnian was examined and one or two relict clay pseudomorphs after halite were found.

Following lunch at the Forest Rock Inn, where we were molested by a drunken wasp, the group (somewhat depleted in numbers) moved on to Mount St. Bernard's Abbey where a 'mini-field trip' was conducted by examining the rocks that had been used to build the monastery. Most of the Charnian volcanic rocks from the vicinity are represented in the walls. From the abbey a pleasant walk, involving the examination of rocks in dry stone walls and an encounter with a monk on a contemplative walk, took us to Whitwick Quarry. Unfortunately, permission to enter the quarry had been revoked for safety reasons just before the visit but we were able to examine the geology at a distance from a vantage point to the south-east of the

quarry. The Whitwick Volcanic Complex was discussed and the Ordovician quartz-bearing microdiorite dykes were demonstrated.

After a very full and most enjoyable day, the group dispersed from the Abbey car park. We extend our thanks to John Carney for his able and knowledgeable leadership and to the management of Bardon plc. who not only gave their permission to enter the quarry but greatly facilitated movement around the site.

Paul Monk

SUBSCRIPTIONS

Despite a number of appeals, several of you still owe back subscriptions, and we are now on the brink of the AGM and a new year. Thus, members in arrears will find a personalised request with this Charnia. This is by way of a final reminder, so please pay now before March 28th if you wish to remain members. Doug is waiting to hear from you!

WEB PAGE

We are almost ready to unveil the Section's web (Internet) page, thanks to the efforts of Mick Steele. Preliminary layout looked very impressive and we're hoping the page will stimulate interest in the Section both amongst our own members and the global geological community. You should be able to log in to www.charnia.org.uk in about a month's time.

NO COMMENT!

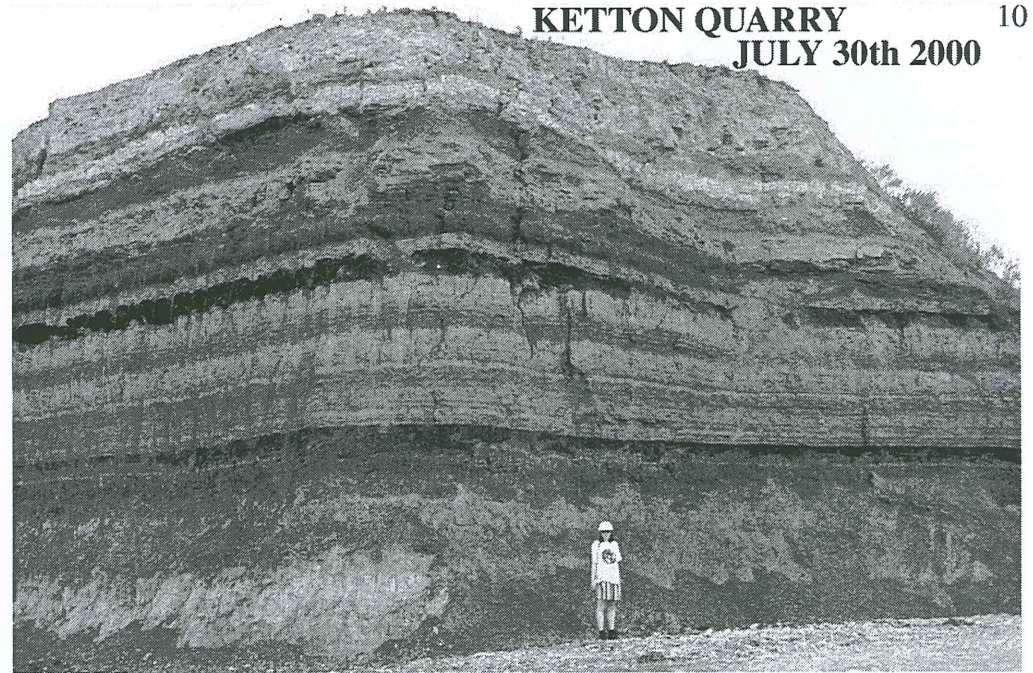
Mark Evans, our publicity officer, and geology curator at New Walk recently received a request for specimens for the new Visitor Centre at the National Forest at Moira. Along with samples of "precambrian rock" (nice and precise) and Millstone Grit, the display contractors also asked for a piece of "Carbonivorous Limestone". As they also want a piece of coal, they'd better watch out that the limestone doesn't eat it!



Group of tired but happy members at Lavernock Point



The Lias Group (Lower Jurassic) cliffs at St Mary's Well Bay



A magnificent Rutland Formation (Middle Jurassic) face at Ketton Quarry



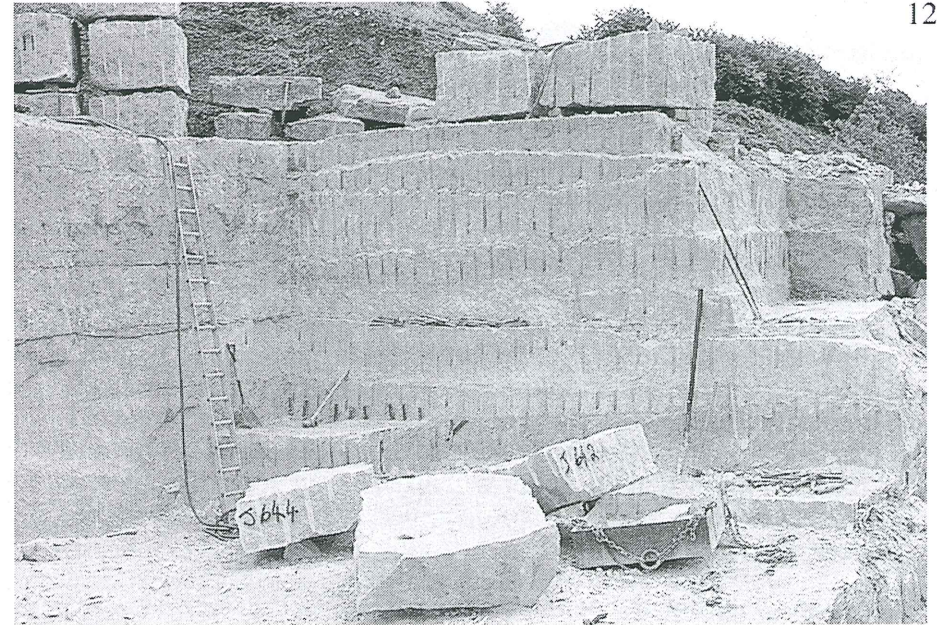
A trip to Ketton Quarry is invariably popular. Can you spot yourself?

WANTED! - YOUR E-MAIL ADDRESSES

As the 21st century gets under way, the speed of technological advance increases exponentially. One of these advances is the provision of electronic mailing facilities via computers. We know that more and more of you are 'getting on line' and making increasing use of this simple and marvellous tool. We also know that some of you wouldn't touch the d*** things with a bargepole! Nevertheless, we would like to keep a record of those of you with e-mail addresses, whether they be home or work based, as this is by far the quickest, cheapest and most convenient way of disseminating Section C news. We could cut our postal bill substantially by mailing information electronically and it would also enable us to communicate immediately short items of interest which otherwise would not be worth mailing on their own. So this is an appeal to you to submit your e-addresses, do this simply by sending a blank e-mail to as48@Leicester.ac.uk (your e-address will appear automatically at the top of your mail). Apologies to the few whose addresses we already have, but can you submit them again please? And don't worry those of you who are not on line, we will of course continue to send out hard copies of circulars and a 'real' Charnia to you as before.



The beautiful valley of the Wye from Monsal Head viaduct



Traditional working of Ancaster Freestone, near Ancaster 20/5/2000

ANNUAL GENERAL MEETING, WEDNESDAY MARCH 28TH

Please make a note in your diaries of the AGM, which is approaching rapidly. For the Section to function healthily it is essential that members feel involved, and the AGM is the ideal forum for voicing concerns or suggestions. It has become customary to whizz through the business and trust that the officers and committee have got it about right, but this is the member's night and we would like to hear from you, particularly if you wish to take on an active rôle. Find a proposer and seconder, submit a nomination form to the secretary at least two weeks prior to the AGM containing your full name, post standing for and the signatures and names of your two sponsors. It is as simple as that. In the event of multiple nominations for particular posts, there will be a vote on the night. All posts are open for nominations, it doesn't matter if the current incumbents wish to continue or not. For information, the rules state that the Chairman must stand down after two years, all other officers may continue indefinitely subject to re-election, but committee members and co-optees must stand down after two years. As things stand the Chairman has one more year, as do three committee members and the three co-optees, which leaves one committee vacancy to be filled. The committee will recommend a person for this post, but if you fancy the job, you know what to do!

Dear Mr. Darwin,

You might find it presumptuous of me, if not a little macabre, that I should take up my pen and write to you more than a hundred years after your death. But I'm encouraged to do this because it is on record that you yourself wrote almost 14,000 letters on scientific issues, many of which I expect were answers to unsolicited correspondence... I cannot know whether or not, deep in your tomb in Westminster Abbey, you've been keeping abreast since your demise with the ups and downs of your theory of evolution which you called, quite cleverly (if a little misleadingly as it turned out), 'natural selection'... Despite the gulf that separates us in time and means, I know that this letter will arouse your scientific interests, for it touches on some of the central issues with which you wrestled all your life...

My Dear Dover,

I am so glad you have taken the time and trouble to write to me. It is one of the saddest of aspects of human existence that as soon as one passes away then it is generally assumed that the deceased has no further interest in what he or she spent a great part of life investigating. From what you tell me of the Darwin industry of scholars in your day, busy seeking out every nuance of my life and thoughts, I have to conclude that there is indeed life after death. Being human, I am pleased with the accolades that have come my way over the years, although I'm disturbed to hear that my name, or, more accurately, my natural selection theory, can be accepted in some quarters without much in the way of experimental or observational evidence...

I promise to take a more active part and interject with more telling questions in the future. I intend to be patient for I know you want to take me on a hundred-year journey that has led to the wonders of biology in your own day. This is a journey I can take leisurely and with pleasure, for I've got very little else to do, except listen to the incessant drumming of feet on the flagstones in the Abbey.

Ever yours most truly,

Charles Darwin

The above is the theory anyway. Beagle 2 is a British spacecraft that is intended, at the time of writing, to land on the planet Mars on Boxing Day, 2003. The very grand intention is to establish whether there has ever been any life on the Red Planet.

The team behind the Beagle 2 Mars Lander have reached the £30M needed to underwrite the cost and this has secured the probe's place aboard the Mars Express Mission, organised by the European Space Agency to be launched from Kazakhstan in June, 2003.

Once on Mars, the probe should be able to collect samples of rock and soil and test the samples for evidence of water, carbonate minerals and organic matter. A similar probe is being constructed by NASA and this is planned to land on Mars shortly after Beagle 2.

As a boy, I followed the exploits of Dan Dare in the 'Eagle' as he tangled with the Mekon. I also enjoyed the novel 'War of the Worlds', where Martians invaded Earth. Percival Lowell had convinced himself and many others that vast artificial canals had been constructed on Mars, to bring water from the polar ice caps. Indeed, successful Mars missions have transmitted clear pictures of flow channels, sedimentary structures and huge extinct volcanoes. There are seasonal changes in the polar regions of Mars, marked by the waxing and waning of ice caps. This ice is predominantly solid carbon dioxide, though it is thought to contain water. If only the pictures had shown ancient pyramids and ruined cities...

As well as the successful probes, there have been a number of failures, so perhaps Mars is an unlucky place to approach. NASA works towards a manned mission but the costs keep rising and consequently unmanned expeditions might have to serve for the next decade at least. The cost could be reduced if the idea of a one-way manned mission was ever to be accepted but that is perhaps too radical an approach.

Roger Newman



Salubrious surroundings at Scunthorpe steelworks!

WHERE THERE'S ****, THERE'S BRASS!

Those of us intimately familiar with the Oxford Clay may possibly have retained the odd coprolite or two in our collection, particularly if it has a nice taper and constriction marks! I can't say that I've ever come across sufficient coprolitic material to ever shovel it out by the barrow-load, though that is precisely what Amy Cockett describes in her article 'Old Occupations' (Family Tree Magazine, Sept. '99.) Amy asks, 'Do you have a coprolite miner on your family tree?' Looking at the 1871 Census data, Amy found references to 'coprolite labourers' and 'fossil diggers' among her ancestors. The first beds of phosphatic material to be exploited in Cambridgeshire were at Burwel in 1851. The discoverer, a miller by the name of John Ball, ground the material and followed this with acid treatment, so founding the world's first chemical fertiliser business. Not just coprolite but any fossil phosphatic material was removed and powdered. This sends a cold shiver down your back when you think of the molluscs, ammonites and fish which were destroyed - a sentiment expressed some time ago in 'Charnia' when the lime-kilns of Barrow-on-Soar were discussed.

'Mining' this material barely scratched the surface, with trenches being typically three metres in depth. The industry extended from Soham, just to the north of Wicken Fen, in a line running south-westwards to Abington and on into Bedfordshire. The coprolite extraction was most intense in the triangle formed by Clayhithe, Lode and Horningsea, to the north-east of Cambridge. Apparently, unexploited beds of this material lie just beneath the pavements of modern Cambridge - I wonder if any of the cash-strapped colleges have considered ripping-up their lawns!

When the Oxford Clay gets wet it forms one of the most sticky varieties of muck you're ever likely to encounter. It was for this reason that the coprolite miners wore 'creepers' with their heavy boots. Amy describes these as 'murderous looking spiked iron over-soles which must have made them feel that they were lifting a ton-weight with every step.'

The yield was a staggering three-hundred tons per acre (75 tonnes per hectare). The wage for a fit digger on piecework was around £2 per week. 'Aglabs' (agricultural labourers) earned around seven or eight shillings per week in the early part of the latter half of the

nineteenth century - imagine the wealth in leaving the land to become a coprolite miner! By 1874 the industry was worth £628,000, which exceeded the value of the British tin industry. Landowners found sudden wealth and Cambridge had an influx of Irish navvies, previously employed in the great railway building boom. As with all things of this nature, the wealth was short-lived and after three decades or so, the industry declined. This was due to agricultural depression and cheaper imports. Coprolite mining enjoyed a brief and very limited reprieve during the Great War to provide chemicals for munitions. I don't have any details about the horizons from which the phosphatic materials came from, whether or not the mined areas were back-filled and what the subsequent use of the land was. If any reader does have more information, please contact 'Charnia'.

Graham Stocks

LOCAL GEOLOGY IN THE NEWS

On Saturday 23rd September 2000, the counties of Warwickshire and Leicestershire were subjected to an earthquake, measuring 4.2 on the Richter Scale. The earthquake was centred around the village of Budbrooke in Warwickshire, and was felt at 5.23 am. The shock waves extended across the East Midlands, with reports of ornaments on shelves and walls shaking, and windows rattling. The earthquake was reported by seismologists at Edinburgh to be quite substantial for the UK.

Our local 'star fossil' *Charnia masoni* was once again in the news (27th Sep 2000), when Drs Trevor Ford and Helen Boynton put splodge under the microscope! The Leicester Mercury took a look at some of the oldest fossils in the world but failed to notice when taking their photograph that Trevor was holding what looked to be a beautifully preserved ammonite!

In October, archaeologists released news of the exceptional discovery of flint tools, hyena droppings and more than 100 animal bones at Glaston in Rutland. The finds date from a period of 'incredible climatic instability' between 30,000 and 40,000 years ago when Neanderthals were possibly settling in this region.

Joanne Norris

Programme for the remainder of 2000/2001 winter season

All meetings held at 7.30 pm in room LT10 in the Geology Department,

Leicester University, except where indicated

Wednesday January 17th

Dr Michael A. Taylor (National Museums of Scotland, Edinburgh) - 'Mary Anning, Thomas Hawkins and Hugh Miller, and the problems of being a 19th century fossil collector in the provinces'

Wednesday January 31st

Dr John Faithfull (Glasgow University Museum) - 'A lassie's best friend - Scottish and other British diamonds'

Wednesday February 14th

Members evening, to be held at the New Walk Museum

Wednesday February 28th

Professor Paul J. Hill (Division of Earth Sciences, University of Derby) - 'Acritarchs - dustbin goodies for the future?'

Saturday March 3rd (whole day)

Saturday School, Vaughan College. 9.30 am - 5.00 pm. 'Dangerous Earth'. Seven distinguished speakers will give talks on geohazards such as giant volcanoes, tsunamis, mega-earthquakes, bolides, etc. Speakers include Stephen Self, Bill Maguire, Tony Waltham and Simon Day.

Wednesday March 14th

Dr David Waltham (Royal Holloway College, London) - 'Models of tectonics and sedimentation' (live computer demonstrations)

Wednesday March 28th

AGM and Chairman's address - John G. Martin (New Walk Museum, Leicester) - 'Great Sea Dragons'

SATURDAY SCHOOL, MARCH 3RD 2001

Just to remind you all that this promises to be one of the best ever in our series. Organiser Professor Andy Saunders has put together a programme which features some of the foremost experts in the country. Cost £15.50, with concessions available. Book with Vaughan College (0116 2517368).

Abstract for talk scheduled for January 31st 2001

A lassie's best friend - Scottish and other British diamonds

Dr John Faithfull
University of Glasgow Museum

There are at least three old accounts claiming to describe the occurrence of diamonds in the Scotland and Ireland. In two of these cases, the specimens were thought to be lost, and so the accounts could not be confirmed. However, old specimens have recently come to light which have allowed these claims to be checked. This work has yielded some pleasant surprises!

Very recently, an orangeitic (=Type II Kimberlite) dyke has been discovered in NW Scotland. While no diamonds have yet been recorded, this does offer some hope for further exploration.

Abstract for talk scheduled for February 28th 2001

Acritarchs - dustbin goodies for the future?

Professor Paul J. Hill
Division of Earth Sciences, University of Derby

Acritarchs are organic-walled resting cysts of planktonic algae, mainly marine, with an evolutionary history ranging from the Proterozoic to Recent. They were most common in the Lower Palaeozoic where they were the key contributors to the base of the food chain.

The group is in all probability polyphyletic and its heterogeneous origin is reflected in the extreme morphological diversity observed. As such, they cannot be assigned to a known group of organisms, hence the name Acritarcha (of "uncertain origin"). Even though they are known to be of great value in biostratigraphic applications and in palaeoenvironmental interpretation, their potential has yet to be realised.

The lecture will present an illustrated overview of acritarch morphological variation with particular reference to Silurian forms, and will examine their potential for future biostratigraphical interpretation and palaeoenvironmental reconstruction.

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