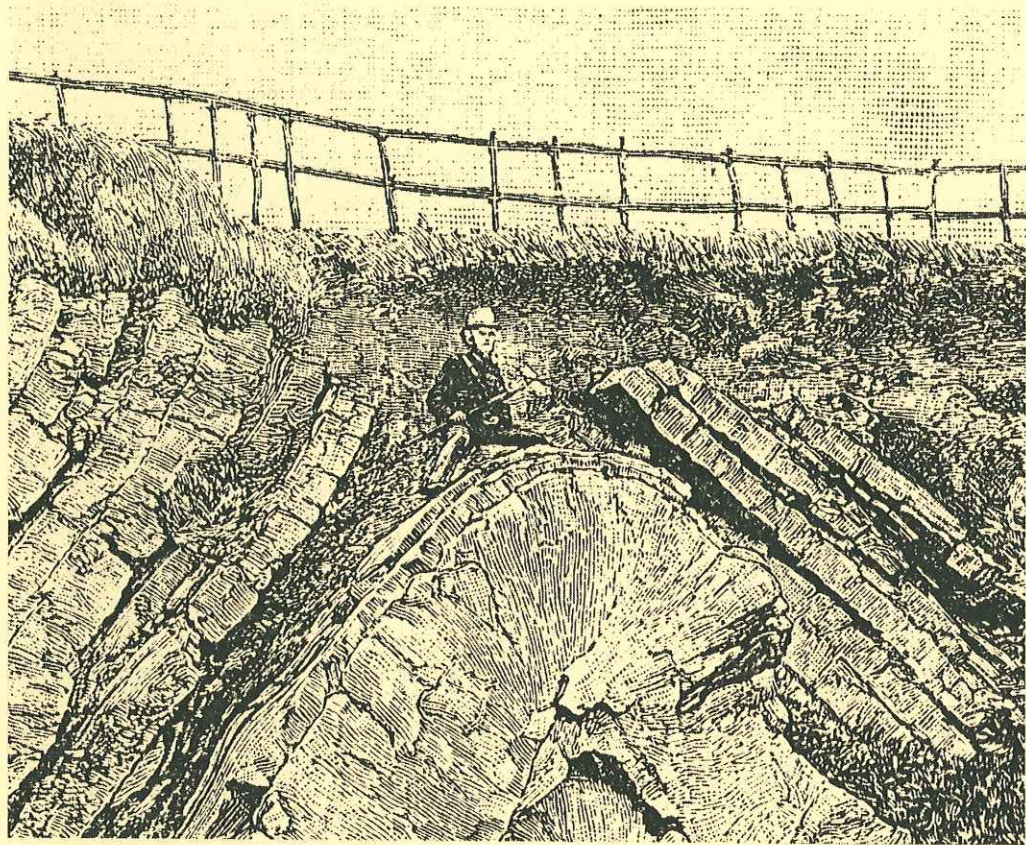


CHARNIA

LEICESTER
LITERARY & PHILOSOPHICAL SOCIETY



THE NEWSLETTER OF SECTION C
(GEOLOGY)

SUMMER 2001 EDITION

EDITORIAL

I'm seldom - if ever- asked about the front cover graphics of 'Charnia'. I wonder how many readers recognised the thin sections on the cover of the previous edition? I've taken this Summer's front cover illustration from 'Notes on Current Science, Invention, and Discovery' from the September 1889 issue of 'The Leisure Hour'. The article itself is called 'Photographs of Geological Scenery: Work for the Field Clubs' and the illustration shows 'curved strata near Draughton, in Yorkshire'. This article is a plea for amateur geologists to record landscape features photographically. To quote: 'The action of the British Association in stimulating the natural history and other field-clubs of Britain to take photographs of interesting geological scenery in their respective counties is already producing good results. It will be remembered that at the meeting of the Association held last year at Bath, a proposal was made to appoint a committee to collect and register photographs of features of geological interest in every county in the kingdom. The subject will be brought up again this year at the Newcastle meeting of the Association. Among the societies which have already done good field work with the camera are the Geological Society of Yorkshire, Chester Society of Natural Science, Leicester Literary and Philosophical Society, Croydon Microscopical and Natural History Society, East Kent Natural History Society, and others'. The article stresses the importance of photographing the many new railway cuttings before they became grassed over - a reversal of the situation at Tilton Cutting a century later (some members may have volunteered to clear the trees and shrubs a few years ago and recall how well nature reclaims landscape). With the advances in photography made since the 1880s I wonder if we can take pictures of superior quality today - have you tried black and white recently, by any chance?

And now for something completely different: volcanoes and seismicity are rarely out of the news and none more so than Pompeii-Herculaneum's historic outbursts. A British-Italian research team reported in 'Nature' last month that people who had taken cover from the initial activity survived for several hours before being hit by a nuée ardente. The 500°C cloud burst upon the poor unfortunates who were cooked or carbonised in situ. The researchers reported that 'These individuals do not display any evidence of voluntary self-protective reaction or agony contortions, indicating that the activity of their vital organs must have stopped within a shorter time than the conscious reaction time, a state known as fulminant shock'. Those who suffered this fate were the people of Herculaneum, while those in Pompeii show evidence of writhing in great pain. The taphonomists among you might like to know that the 'sleeping' Pompeians assumed their death rictus as a result of coagulation of muscle protein (i.e. cooking) resulting in the extended spine/clenched fist pugilistic pose. The last time Vesuvius erupted in a newsworthy manner was in 1944. The archaeological excavations of Pompeii and Herculaneum started around the time that Sir William Hamilton took up his forty-year diplomatic stint in Naples. It was Hamilton's second wife, Emma, who spent quite a bit of time with one Horatio Nelson. Hamilton seems to have been more interested in vases and volcanoes. Cuckold or not, Hamilton commented on the 1794 eruption of Vesuvius as being no more than 'three farts, a sneeze and a sh**e'. Hamilton at least had a sense of proportion and scale.

Contemporary Neapolitans seem to share the sort of resignation borne by Americans living on the Western seaboard. Well, Californians that is. Which brings me to the subject of

'blind thrust-faults'. This is a thrust which produces no fracture at the Earth's surface, though it is evident as a vertical displacement through a monoclinical fold. Blind thrust faults underlie Southern California and one caused the 1994 earthquake in Los Angeles. This type of fault also levelled parts of Gujarat and killed 25000 recently. It was only recently realised that a blind thrust fault caused the 1897 Assam earthquake. This particular event left no evidence of a fracture on the surface, yet it was a Richter 8.8, displacing a huge plateau 15 metres vertically in three seconds. This came to light only recently when Victorian triangulation elevations were re-evaluated.

It's been a little wet of late, in fact the wettest weather since the New England colonists decided to go it alone. Great for the lawn perhaps, but lubricated and liquefying gradients as a result of this weather have been in the news. We've said goodbye to two fairly big pieces of chalk cliff on the South Coast, though perhaps of greater interest to palaeontologists was the large slippage at Cain's Folly, near Lyme Regis. Speaking of fossils, curators at the National Museum of Wales in Cardiff found that their prize *Ichthyosaurus* was a fake, being an amalgam of two types plus a bit of DIY for the missing bits. It is now on display as an example of a fake under the title of 'Iffyosaurus'. The specimen was presented to the Museum in 1884. Sadly, there are dishonest people who not only take money for fakes but waste palaeontologists' time today. A recent example was the so-called 'Archaeoraptor' which turned out to be a dinosaur tail wedged to a fossil bird. Fossil dinosaur-birds evolved from the bipedal theropods and it seems that feathers were an evolutionary adaptation favouring thermoregulation, not flight. Interestingly, detractors of the evidence for fossil birds have claimed that the feather impressions are no more than mineral outgrowths which developed during the fossilisation process. I seem to recall reporting in 'Charnia' that a recent poll identified 40% of Americans preferring the teaching of Creationism to evolution. I wonder what the Creationists make of the Permian fossil *Eudibamus cursoris*. It seems that this little reptile, just over 25cm long, could run around on two legs, perhaps as a strategy to dodge being eaten by the bigger fellahs.

The other two-legged lot, who began strolling around some 300 million years or so later, might be the subject of next year's Saturday School, though we will have to wait a while and see. Hominids (the fossil ones) are also often in the news. The Neanderthal - *Homo sapiens* hybridisation debate keeps resurfacing without any firm conclusions, though no doubt research attracts funding and pays for school fees. Also, the 'oldest' keeps popping up; currently the record is held by 6 million year old 'Millennium Ancestor' who roamed a part of the Earth called Baringo in present-day Kenya. Lucy, by comparison, is a mere stripling at only 3 million years old. Using DNA, an Italian research team has concluded that the majority of men in Europe and the Middle East originated from ten male ancestral strains. Two of these strains account for 80% of Europeans and they arrived in two waves: one around 40000 years ago from Siberia and the other 25000 years ago from the Middle East. The remaining eight strains arrived from the Middle East and the Urals between 6000 and 9000 years ago, siring a fifth of modern Europeans. If we do have a 'hominid' Saturday School it should be another sell-out. This year's bookings exceeded capacity and people had to be turned away.

And finally, one article in particular printed in this suspicious, auspicious little journal illustrates the value of peer refereeing when it comes to publishing 'scientific' articles. Read on!

Summer 2000 excursion summary

The summer 2000 season got underway with a trip on May 20th to Scunthorpe to see the Lower Jurassic Frodingham Ironstone and associated deposits in pits near the famous steelworks. The 19 participants began with a guided tour of the town museum under the direction the museum's curator Steve Thompson, who also led the group to the Crosby Warren mine and, later, to an ironstone dump in the steelworks. A beautiful day in June (18th) found 11 of us taking a geological ramble along Monsal Dale and the valley of the Wye in Derbyshire, where we studied the local Carboniferous Limestone under the leadership of Dave Wright. Our annual weekend excursion over June 30th - July 2nd saw a party of 14 members descend on the little seaside town of Penarth in South Wales to study and collect from the Late Triassic and Lower Jurassic cliff sequences exposed along that scenic coastline. This was an excellent field meeting organised and led by Andrew Swift.

Our highest attendance, and highest temperatures, of the season were on July 30th, when 24 members and friends were taken expertly through the varied Middle Jurassic sequence in Ketton Quarry near Stamford by John Hudson. Another quarry was the venue on August 20th when an enthusiastic group visited Quest Pit near Bedford and were introduced to the pleasures of the Oxford Clay by Bedford Museum curator Chris Andrew. Dr John Carney of the British Geological Survey led a visit to Bardon Quarry on September 10th. This was a joint trip with the Warwickshire Conservation Group, with 10 members attending from each society. It was a shame that a planned visit to Whitwick Quarry in the afternoon was forestalled, but alternative arrangements proved popular. The season ended on September 30th with 17 members and guests enjoying a trip down to 'The Smoke', to take a guided tour of the Palaeontology Department's extensive storage areas at the Natural History Museum. Our host, Head of Palaeontology Steve Donovan, could give

members only a glimpse of the millions of specimens stored in that august institution.

I would like to thank all those people who led field excursions, but most of all I would like to thank one entity in particular - God, who, in a year plagued by poor weather, saw fit to bathe all our trips in sunshine.

Dennis Gamble

Data Protection Act

You have all received a form from me requesting you to consent to our holding your details (names, addresses, phone numbers, e-mail addresses) on our Section C computer databases. This written consent is a requirement of the latest version of the Data Protection Act, and if the form is not completed and returned, then we can **no longer hold your details on our computer files**. This means we can no longer send you Charnias, field trip circulars or any other correspondence. Although the majority of you have returned the form, there are approximately 30 of you who have not. For those 30, this Charnia will be your last communication from the Section unless you return those forms. So **please** do it now. If you find a reminder slip in with this Charnia, then you have not replied. If you've lost the form, please phone me for another one.

Andrew Swift



Here is a brecciated limestone bed from the Late Triassic. Is it a storm breccia or debris flow? - answers on a postcard.

Abstract of talk scheduled for October 10th 2001

The Permian of the Arabian Peninsula: tracking climate change after the great Permo-Carboniferous glaciation of Gondwana

Michael H. Stephenson
British Geological Survey, Keyworth

Major palynological studies of Early Permian Gondwanan deglaciation sequences in the Arabian Peninsula have revealed some of the finescale floral, water table and sea-level changes occurring after a major glaciation, and new statistical techniques have helped to identify periglacial floral palaeoecologies and how they evolved during climatic amelioration. The floras of later Permian sediments in Arabia indicate ever-warmer conditions and even aridity, so that they show similarities with those of European Zechstein sequences; this change reflects the northward drift of the Arabian plate to tropical palaeolatitudes during the later parts of the Permian.

Abstract of talk scheduled for October 24th 2001

Earth heritage conservation - why bother?

Keith J. Duff
Director, English Nature, Peterborough

Fieldwork is something that all geologists take for granted, as a vital part of what we do. But over the last 50 years, the number of sites available for study, and the quality of the exposures they provide, has diminished significantly. Why is this happening, and what is being done about it? In this talk, Keith Duff (one of the national Directors of English Nature, the Government's nature conservation agency in England) will describe the pressures being faced by geological sites, illustrate some of the consequences, and explore what is being done to counter these threats. The challenges to geological sites include increased building development in the countryside and around our towns and cities, the use of disused quarries for waste disposal and engineering works to 'protect' eroding coastal cliffs. The talk will also illustrate a variety of positive initiatives being taken by a variety of organisations to respond to these threats. One of the issues which will be discussed is the sometimes controversial question of commercial fossil collecting. Over the past 25 years this has generated considerable debate amongst palaeontologists, and continues to excite strongly held views. The talk will be illustrated by colour slides

showing geological features and conservation issues from across the United Kingdom, drawing on examples from Leicestershire where appropriate.

Abstract of talk scheduled for November 7th 2001

Dolomite - a major geological enigma

David T. Wright
Department of Geology, University of Leicester

The genesis of dolomite in the natural environment has been one of the outstanding enigmas of geology, despite some two centuries of intensive research and debate. The mineral occurs in a range of scales, from micromillimetric laminae in limestones or some clastic rocks, to thick monomineralic sequences. Surprisingly, dolomite has not been synthesised in physico-chemical laboratory experiments at normal temperatures and pressures, so that the chemical controls on dolomite precipitation remain undefined. Conventional hydrologically-driven models of dolomite formation, though popular, often lack empirical support, and encounter fundamental chemical problems related to kinetic impediments in saline solutions: these include the high hydration energy of the magnesium ion, the extremely low activity of the carbonate ion, and the presence of even very low concentrations of sulphate.

The lack of a convincing hydrological model suggests that the search for a solution should be redirected. An appropriate approach is to consider under what conditions the kinetic constraints on dolomite formation might be overcome in natural aqueous saline environments, and whether these conditions could plausibly have resulted in the thick platform dolostones abundant in the Precambrian. Most modern dolomite is found in intertidal to supratidal environments (including alkaline lakes), whereas most Precambrian dolomite was deposited in shallow subtidal marine settings. However, a common factor linking both modern and ancient dolomites is their frequently observed association with benthic microbial communities, typically as stromatolites and cyanobacterial mats. There is increasing evidence that microbial degradation of organic matter, particularly the activities of sulphate-reducing bacteria in anoxic layers beneath cyanobacterial growth surfaces, can play a critical role in the biochemical modification of ambient waters creating the conditions necessary for widespread dolomite formation. It is argued here that benthic microbial communities have played a major role in dolomite formation throughout the geological record.

Indoor meetings 2000/2001 - programme

All meetings begin at 7.30 in room LT10 in the Geology Dept. Leicester University, except where stated.

2001

Wednesday October 10th

Dr Michael H. Stephenson (British Geological Survey, Keyworth) - 'The Permian of the Arabian Peninsula: tracking climate change after the great Permo-Carboniferous glaciation of Gondwana'

Wednesday October 24th

Dr Keith J. Duff (English Nature, Peterborough) - 'Geological conservation - why bother?'

Wednesday November 7th

Dr David T. Wright (Department of Geology, Leicester University) - 'Dolomite - a major geological enigma'

Wednesday November 21st

Professor Peter Andrews (Department of Palaeontology, Natural History Museum) - Title TBA. Theme - Hominids

Monday December 3rd

Joint Meeting with the Parent Body (held at New Walk Museum). Professor Michael J. Benton (Department of Geology, University of Bristol) - 'Extinctions ancient and modern'

Wednesday December 5th

Professor David J. Siveter (Department of Geology, University of Leicester) - 'Ostracod ecology and palaeobiology: sex through time'

Wednesday December 19th

Christmas meeting, to be held at the New Walk Museum

2002

Wednesday January 16th

Paul C. Ensom (Department of Palaeontology, Natural History Museum) - 'Walking on eggshells: evidence for reptiles breeding during the deposition of the Purbeck strata of Dorset'

Wednesday January 30th

Professor Alan Dyer (Department of Chemistry, Salford University) - 'Zeolites - or how an inorganic chemist discovered the Highlands and Islands'

Wednesday February 13th

Members evening, to be held at the New Walk Museum

Wednesday February 27th

Professor Bob A. Spicer (Open University) - 'Fossil leaves: nature's ancient meteorologists'

Saturday March 2nd (whole day)

Provisional. Saturday School, Vaughan College. 9.30 am - 5.00 pm. Title TBA

Wednesday March 13th

Dr Mike Searle (Department of Earth Sciences, Oxford University) - 'Crustal evolution of the Himalaya, Karakoram and Tibet during and after the India-Asia collision'
Confirmation pending.

Wednesday March 27th

AGM and Chairman's address - Andrew Swift (Department of Geology, Leicester University)
- Title TBA

CHARNWOOD REVISITED

A dishonest title! Charnwood has not yet been revisited, although I do intend to do so in the not too distant future. I decided to look at Charnwood again in the Spring of 2000, but we suddenly decided to move, so the visit was deferred. Spring 2001, I thought, but the current Foot and Mouth outbreak has effectively closed Bradgate Park and many other walking areas.....

I decided to let my fingers do the walking and tried to find out who took the first calculated look at the area, from a geological viewpoint. (I had rather thought that T.D.Ford was the first, but this is not the case!) I arrived back in 1790, when William Smith, in his Geological Map of England & Wales, showed the area as consisting of granite and slate. Moving on to 1819, Greenhough's Geological Map of England & Wales showed the Charnwood rocks as clay-slate and porphyry. In 1823-4 W. Phillips and S. Luck Kent undertook further research, and in 1833 Professor Sedgewick read a paper with his conclusions to the Cambridge Philosophical Society. By 1858 specimens of Charnwood's rocks had arrived in a museum and in 1865 Holl had decided that part of Charnwood's rocks were Pre-Cambrian. In 1877 the first of a whole series of papers was published by the Reverend E. Hill and Professor T.G. Bonney.

I traced and looked at 'Geology of the Ancient Rocks of Charnwood Forest', published in 1947, the work of Professor W. W. Watts. In the preface of that book he gives a special mention to the Leicester Literary and Philosophical Society, under whose auspices the volume was published. Then I found a name I recognised ("I know him!", I thought...) I give the full reference so that you can think the same: Transactions of the Leicester Literary & Philosophical Society, Volume 81, 1987. 'A Guide to the Geology of the Precambrian rocks of Bradgate Park in Charnwood Forest, Leicestershire.' D. S. Sutherland, H. E. Boynton, T. D. Ford, M. J. Le Bas and J. Mosely with the assistance of K. Pontin and M. K. Whately. With suitable humility I intend to follow my many distinguished predecessors.

Will I find anything new? Probably not, although I buy a weekly lottery ticket on a similar hopeful basis, just in case... I will observe an instruction in that last mentioned work and would remind anyone else bound for that area of its terms: 'Under no circumstances should hammers be brought into the park; there must be no disturbance of outcrops, and no specimens may be taken.' I assume my sandwiches are allowed, and perhaps just a few biscuits...

Roger Newman

Two lovely (and geologically important) cliffs along the Severn



Garden Cliff near Westbury-on-Severn

Two excellent field trips



On the ferry en route to the Isle of Wight, 18/6/99



Wainlode Cliff near Gloucester



Hicks Lodge opencast pit near Ashby-de-la-Zouch, 10/7/99

SUMMER FIELD PROGRAMME 2001

SATURDAY MAY 19th

The British Geological Survey collections at Keyworth.

HOST: Dr Mike Howe, Chief Curator, BGS

FRIDAY JUNE 22nd - SUNDAY JUNE 24th

Geology of the Yorkshire Coast, based at Scarborough.

LEADERS: Drs Mike Romano and Martin Whyte, University of Sheffield

SATURDAY AND SUNDAY JULY 7th AND 8th

Charnwood geology (Saturday) and Ketton Quarry (Sunday). These excursions are being run for the Geologists' Association, but Section C members are welcome to attend. There won't be a circular sent out for these trips, and would-be participants must register their intention to attend by contacting Andrew Swift.

SATURDAY or SUNDAY AUGUST 19th or 20th

Shadwell Quarry, near Much Wenlock. Silurian sediments and fossils.

LEADER: Dr Gary Mullins, Geology Department, University of Leicester

SUNDAY SEPTEMBER 16th

Geology around Hunstanton. Cretaceous and younger sediments.

LEADER: Dr Roy Clements, Geology Department, University of Leicester

SUNDAY SEPTEMBER 30th

Cleeve Hill, Cotswolds. Middle Jurassic sequences.

LEADER: Mark Barron, British Geological Survey, Keyworth

Details of the excursions may be obtained from Field Secretary Dennis Gamble on 0794 7725361 or Chairman Andrew Swift on 0116 2523646 or 0116 2833127 (evenings). Members should return the slip from the pre-excursion circulars to ensure their places on these trips. Non-members who wish to come on these excursions must notify either the Chairman or Field Secretary beforehand.

Section C website update

The domain name charnia.co.uk has been reserved by SEEM SOLUTIONS, and the isp where the site will reside is Totalise PLC. The size of the site is a reserved 20Mb with options to expand to 30Mb if required.

The design of the content of the site is currently being ratified by the committee, and will give a broad insight into the history and activities of the section. There will be a 'public' area for visitors, and a 'members' area which will only be accessible to the paid up membership, who will receive a user name and password upon receipt of their subscription. The member's area will hold all of the transcripts of lectures, and material that is of interest to the membership.

Hopefully, storage permitting, we will be able to have picture records of field trips and lectures, plus a 'feature site' that covers a topical subject. The content is currently being annotated ready for inclusion, and I would expect the site to go 'live' around June 2001.

We will keep you posted!

Mick Steele

Desperately seeking *Suchomimus*

In January 1999 I happened to watch a National Geographic documentary about an expedition to Niger, led by Professor Paul Sereno, a palaeontologist from the University of Chicago. It was to be the catalyst that would send me halfway around the world on a quest to see for myself the only specimen of *Suchomimus tenerensis*, a flesh-eating Cretaceous dinosaur similar to *Baryonix walkerii*.

Sereno's team travelled to Niger in 1997 and endured all manner of hardships in order to make the expedition a success, from Saharan sandstorms to flat tyres and armed bandits. The documentary followed them working in harsh conditions, sending the bones back to Chicago and then preparing the specimen ready for mounting in a museum. It was fascinating, painstaking work but the look on Sereno's face as he saw the completed cast before him was priceless. Here was a unique discovery, a revelation to science!

My interest in palaeontology was fuelled further by Sereno's article encouraging people to get involved by joining a society or classes in order to learn more, or just go out there and dig. I started attending classes at a geological society in Finchley, London and throughout 1999 I listened to lectures similar to those presented to Section C. One of the members knew of my obsession with the USA and suggested I go to Chicago to see 'Sue', the *T. rex* at the Field Museum. Why not see the *Suchomimus* that Sereno dug up too?

I needed to know where the specimen was displayed, so I e-mailed Professor Sereno. He replied that it was in the Childrens' Museum, Chicago. By June 2000 I'd saved enough for a holiday with friends in Illinois and was flying over Lake Michigan - finally it was happening!

Inside the Childrens' Museum (chosen because it was hoped that, as most kids love dinosaurs, some might be inspired to become professional palaeontologists one day), the exhibition centred on the enormous, crouching figure of *Suchomimus*. It was mounted in exactly the position that Sereno had wanted, as I'd seen on TV over a year before. All the stages of the Niger expedition were displayed, from how much provisions and water they needed to how to prepare fossils back in the laboratory. I learnt that the team was so touched by their experiences in Niger that Sereno decided to present the people there with their own replica specimen. So he ran the Chicago Marathon, raising \$7500 - enough to make another cast.

All the images from TV, articles and my own experiences came together in my mind as I was standing next to this unique, remarkable specimen. In a small way, I'd followed my own 'quest' and discovered, albeit second-hand, the thrill of unearthing a previously unknown and undreamed of creature, following it's resurrection and culminating in a visit, face to face with *Suchomimus*, on my own Voyage of Discovery.

Elaine Smith



Elaine at the end of her quest in Chicago, by the skeleton of *Suchomimus*

Press Release - embargoed for 1/4/01

'A major breakthrough in genetic engineering: amateurs succeed where professionals have so far failed'

A team of amateurs working on fossils at Peterborough Museum and Art Gallery have made a discovery which will surely set the scientific world alight. Ever since Watson and Crick discovered DNA's double-helix in 1953, work has gone on in molecular biology to understand the intricacies of genetics and evolution.

Ancient DNA has been discovered in some rare fossils, such as insects preserved in amber. This was the inspiration for the film 'Jurassic Park'. In this film scientists were shown successfully using ancient DNA to inoculate chickens' eggs and alter the genome. The result was to breed various dinosaurs. (Birds are now known to be the last surviving branch of the dinosaurs. Most dinosaurs became extinct about 65 million years ago.)

Peterborough is world-famous as the source of Jurassic marine reptile fossils from the Oxford Clay. This provides the raw material for the brick industry, and quarrying the clay reveals the skeletal remains of many animal types. Peterborough Museum has the best collection of these marine reptiles outside the capital and from time to time new ones are found. In the course of preparing some of these ancient skeletons the idea was born to try to extract DNA from the bones of a plesiosaur called *Cryptoclidus eurymerus*. Over a period of five years the small group of amateur palaeontologists, working in strict secrecy at the museum, attempted many ways of extracting the elusive DNA from crushed fossil bone. Just over a year ago they thought they had achieved success.

Using microscopic techniques, they injected fossil DNA into the spawn of the Common Newt, *Triturus vulgaris*, and observed the developing modified embryos as they grew. Normal newt-spawn was kept in a separate aquarium as a control - and sure enough, the genetically modified embryos were seen to be developing to quite a different pattern. When they hatched, the tiny creatures were kept in a large aquarium. They had long, thin necks and fat stubby bodies like *Cryptoclidus*, though they retained a crest on the head and back. Instead of legs and fingers like newts they had fleshy fin-like paddles. Some of them died but about fifteen survived and began to grow.

Imagine the excitement when the group realised that they were almost perfect miniature replicas of the Jurassic plesiosaur. At the end of six months the creatures were about the size of a hedgehog, far bigger than the newts in the

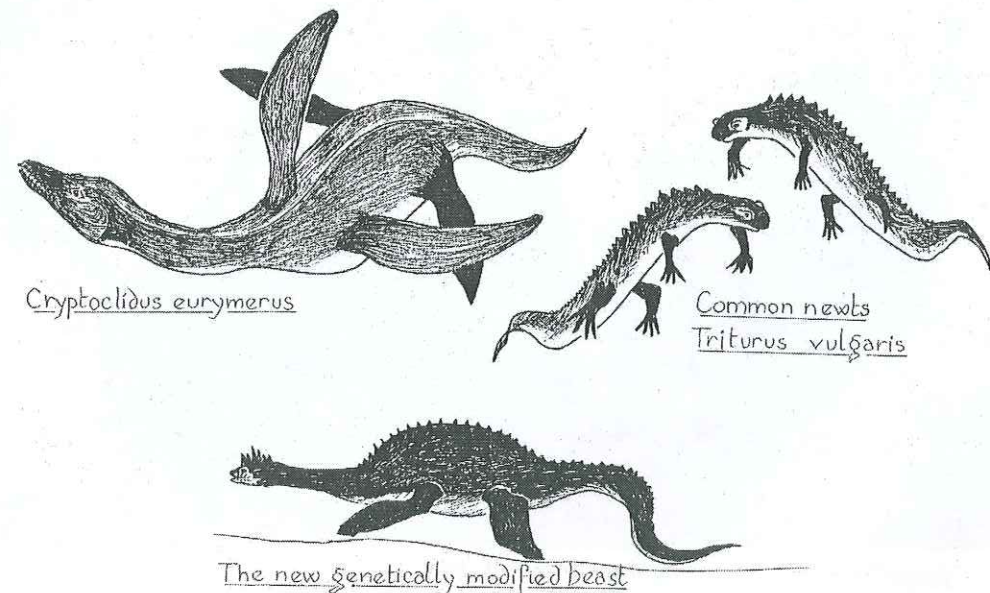
control tank. The babies were initially fed on water fleas (*Daphnia pulex*) which are often used by aquarists to feed fish. By the time they had reached hedgehog-size they were on a diet of chopped worms and snails. Their sharp, needle-like teeth easily crushed the snail shells so that they could eat the soft body-parts. It is known that *Cryptoclidus* ate belemnites and molluscs. Snails are not greatly different from the diet of these Jurassic ancestors. By the Autumn of 2000 the animals were too large to stay in the aquarium and were big enough to eat small fish, as their Jurassic ancestors did.

In September 2000 it was possible to release them into a flooded gravel pit to the south of Peterborough. They have occasionally been spotted and have grown considerably. The animals have not yet been given a scientific name, so an invitation is extended to anyone interested to send their suggestion to; The Curator, Peterborough City Museum & Art Gallery, Priestgate, Peterborough, PE1 1LF. One name already suggested is *Triturosaurus improblematicus*. See if you can improve on that. It has not been possible to sex the animals so it is not known whether they will breed in the wild. F1 hybrids are usually sterile.

There has been some criticism of the project on the grounds that the creatures could breed and escape into the River Nene, posing a serious threat to fish stocks in the river. If you should see one, please report it to the Museum.

Acknowledgements: The team is deeply indebted to Professor Olaf Pisrol of Uddavalla University in Sweden for his advice and encouragement throughout the course of his research in this project.

Alan Dawn



STATEMENT OF ACCOUNTS AS OF 28/3/2001

RECEIPTS	2000/01	1999/00	EXPENDITURE	2000/01	1999/00
Cash in hand	19.62		Reimburse. NHM trip	20.00	
Bldg Soc.	490.68	510.30	Insurance	99.16	74.70
Subscriptions	556.00	432.50	Speakers' expenses	246.10	211.94
Donations		2.00	Stationary	4.42	7.55
Bldg Soc. interest	9.26	5.53	Photocopies	1.20	
Sale of hats		3.00	Charnia printing	57.60	60.01
Coffee sales	34.79	11.43	Postage	51.42	55.10
Anniversary dinner		940.00	Anniversary dinner		977.22
Payment NHM visit	20.00		Cash balance	4.87	
	1130.35	1896.52	Bldg Soc Bal	645.58	650.45
				1130.35	1896.52

Douglas Lazenbury, Treasurer
Audited M. J. East 24/3/01

Lecturers for the Saturday School, 'Dangerous Earth', 3/3/01



Simon Day, Bill Maguire, Steve Self, Tony Waltham, Rosalind White, Andy Saunders (organiser) and Alan Mills

Warwickshire Conservation Group
Summer Programme of Field Trips

Our good friends at the WCG have sent their summer programme, which is given below. Section C members are welcome to attend these excursions, and, in view of the close association of the two societies, will not be asked for the normal WCG charge for non-members. Details are available from the Secretary Maurice Rogers on 01788 812869. Please make sure you inform him beforehand if you intend to attend.

Sunday May 20th (11am - 2.30pm)	Wednesday 20th June (7pm -9pm)
Blockley Brick Quarry	Warwick town trail
Leader: Pete Blake	Leader: John Crossling
Sunday July 8th (day trip)	Sunday September 16th
Wren's Nest, Dudley	Cross Hands Quarry
Leader: Jon Radley	Leader: John Crossling

Statistics

For those of you obsessed by statistics (as I am - a bit), you may be interested to know that as of going to press, we have 129 members. This is made up of 85 individual members and 22 joint members. It may also be of interest to reflect that this is one of the best memberships of the Section's history, although not quite approaching the glory days of certain periods in the 19th century. Numbers weren't always recorded, but at its peak the Section had around 200 members, and at its lowest ebb (certain years in the early to mid 1950's) it hovered around the 7-20 mark. In the early 1950's, indeed, its very existence was in doubt, and for a couple of seasons, no meetings were held. If you want to know all about it, and how the Section gradually became re-invigorated, Trevor Ford would be delighted to tell you all about it! In due course, depending on wind direction and the twinkling of the tea (apologies to Lewis Carroll), I may finish my history of Section C from 1930 to date. Its about half done, and this year I really must finish it

Andrew Swift

Leicester Literary and Philosophical Society

Geology Section (C)

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