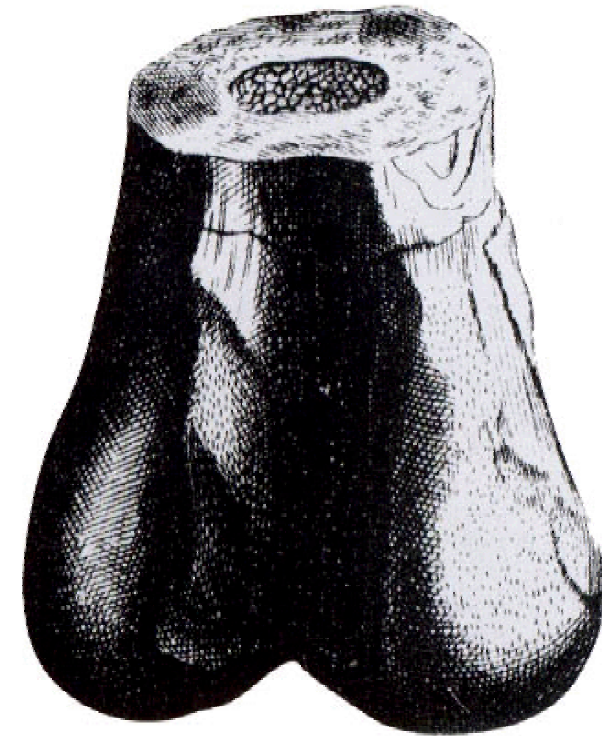


CHARNIA

SPRING 2004 EDITION



LEICESTER LITERARY & PHILOSOPHICAL SOCIETY: THE
NEWSLETTER OF SECTION C (GEOLOGY)

Website: www.charnia.org.uk

Spring Editorial - 2004

There's always a sense of schadenfreude in not being the last person to get a joke or some fine point in a discussion, though I was annoyed with myself recently to learn that I hadn't realised why the ammonite genus *Hildoceras* was so named. The cover of the previous issue of 'Charnia' bore a reproduction of a group of fossils found and drawn by Robert Hooke, published posthumously in 1705, though written and etched prior to 1668. Hooke (1635-1703) was a brilliant English polymath who contributed far more than has been realised to science and other fields of discovery. It seemed to me that Hooke really did have some idea about what fossils really were and that he had an understanding about Earth processes.

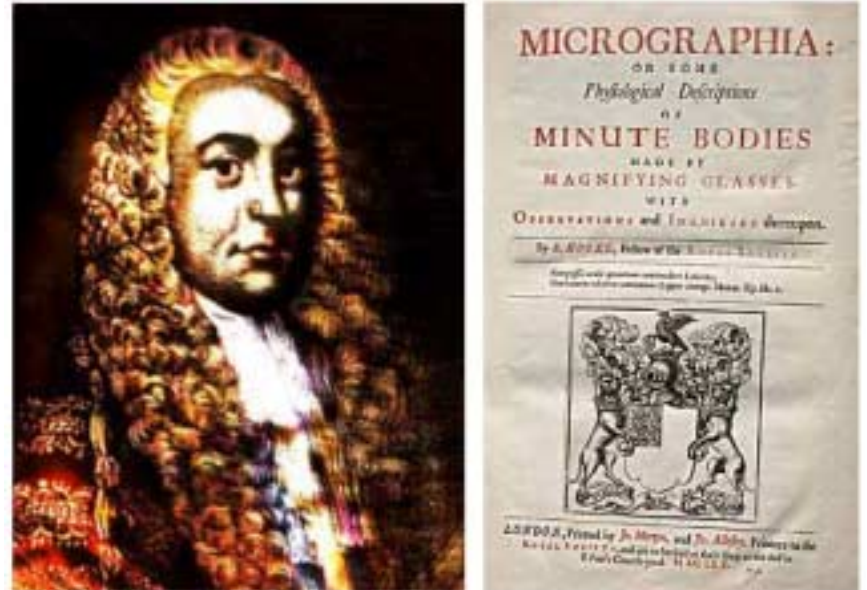
Voice an opinion contrary to biblical flood myths and you would find yourself accused of heresy and things would soon become very hot for you! So exactly when did free-thinking Earth scientists first evolve? There was a Professor of Chemistry at Oxford, called Robert Plot, who published 'The Natural History of Oxfordshire' in 1677. In this scholarly work are Plot's beautiful drawings of fossils. Sadly, his interpretations of these remains were tainted by prevailing antediluvian and biblical flood mythology. His interpretations may amuse us now, particularly the part of a *Megalosaurus* thigh bone, which he saw as an exceptional soft-tissue preservation of a pre-Noachian flood human giant, aptly named at the time *Scrotum humanum*.

So, what made Robert Hooke so unique and why do we appear to know so little of his accomplishments? A student of A-level biology might just know of Hooke's 'Micrographia' if their text contains a reproduced engraving of a flea, published in 1665 and an attentive GCSE science student might be able to tell you something about Hooke's Law and spring-stretching. Hooke's output was astounding, yet so little direct evidence survives today.

In 1657 Hooke worked as Robert Boyle's paid assistant and devised atmospheric pumps. In 1658 Hooke claims to have invented a spring-regulated watch, an invention conventionally credited to Thomas Tompion. Hooke claimed this timepiece as a 'longitude' watch – anticipating the Harrison marine chronometer by quite a margin. In addition to spring regulation the timepiece also had a device for stabilising the pendulum in rough motion. In 1663, Hooke was elected a Fellow of the Royal Society.

I am unable to list Hooke's accomplishments due to lack of space and time. Believe me, the man was highly gifted and a popular figure about London town. He was ultimately in the company of the best of Restoration

England and though not gifted with the good looks of his close friend Christopher Wren, he was just as popular. In fact Hooke was pale of complexion, chinless, had a largish head with a mop of long and lank hair, which frequently fell across his face, and also had a pronounced stoop. This description comes from John Aubrey's 'Brief Lives'. In fact Aubrey was not in the business of flattery, describing further Hooke's facial features thus: '...his eie full and popping, and not quick.' Aubrey did say, however, that 'In fine (which crowns all) he is a person of great suavity and goodness' and that 'He is and ever was very temperate'.



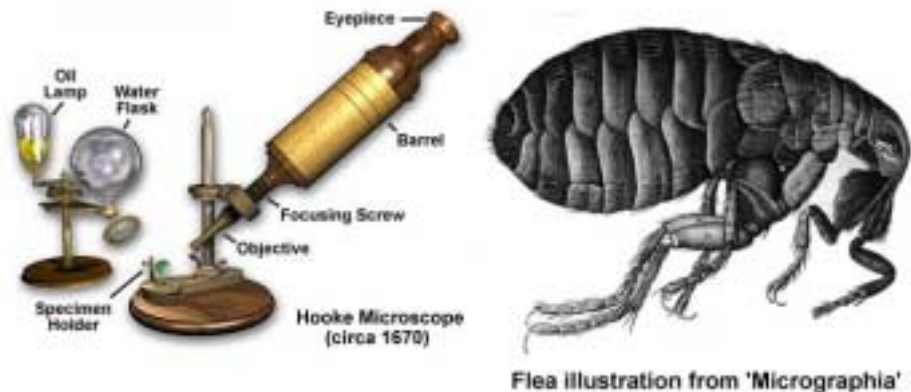
Hooke and the title page of his most famous book

In spite of this we know that Hooke was in demand with the ladies and we know what he got up to with his friends Nell, Doll, Betty and Grace (his niece!) from his detailed diary entries. Readers of 'Charnia' will be spared the prurient details ..! All in all, our Robert was a bit of a lad and after discussions, experiments and what have you at Gresham College, Hooke and his friends would slope off down the road for a jar or two at the Castle Tavern. Gresham College was founded in 1597 through the legacy of Thomas Gresham to establish a venue for educational lectures for the benefit of local townspeople. Thus, Gresham's former townhouse eventually

became the HQ of the Royal Society of London for Improving Natural Knowledge in 1660.

You can bet your life there was one chap who didn't get invited to the Castle after Royal Society discourses and that was one Isaac Newton. Newton cared little for socialising and such trivia, neglecting personal appearance and regular meals. Voltaire wrote this interesting description of Newton: 'Sir Isaac, during the long course of years he enjoyed was never sensible to any passion, was not subject to the common frailties of mankind, nor ever had any commerce with women.' Well, there you go, just in case you thought that he and Hooke might get on famously, swapping notes, etc..

Why didn't Newton fit in and where's this all leading, geologically speaking? Newton was insanely jealous of others' scientific accomplishments and would do anything to stifle, suppress or sabotage anything that took away the limelight that Newton felt should fall on him. Revenge was a key aspect of Newton's personality and he didn't take kindly to criticism, no matter how constructive. In many biographies you'll find phrases such as 'Robert Hooke was an opponent of Newton.' I don't think that this was the case at all. The more I read about Newton the man the more convinced I become that he was a Grade 'A' case of Asperger's Syndrome.



Following Robert Hooke's death in 1703 Newton took over the Presidency of the Royal Society and immediately made plans to move the Society from Gresham College. David and Steven Clark, in their book 'Newton's Tyranny' (Freeman 2001, ISBN 0-7167-4215-2) describe Newton's actions: 'He wanted to remove any obvious association of the society with the

memory of his late enemy. In this he succeeded. Hooke, one of the great polymaths of a creative age, was forgotten after his death. And this was in large measure due to Newton's deliberate actions to expunge his works from the consciousness of the Royal Society and thereby from the world of science. Even Hooke's likeness was removed. When the Royal Society was based at Gresham College and prior to Newton's presidency, a splendid portrait of Hooke had adorned the wall of the society's meeting room. But this portrait "mysteriously" disappeared in the move of the society to its new premises... Magnificent instruments Hooke had made for the Royal Society – a microscope, lamp, air pump, and arithmetic engine – were also removed from the society. It seems likely that the actions taken to deny Robert Hooke his place in the history of science were the work of Isaac Newton.' Even here we find that Hooke is described as Newton's 'enemy'; I think the term 'victim' is more apt.

To make a sweeping generalisation, the male-gender brain is hard-wired for systematising and the female-gender brain for empathising. OK, blokes like to tinker around with mechanisms, such as car engines, or build working models of windmills, etc. and women have highly developed communicating skills required for understanding relationships and winning friends. Asperger sufferers have the male-gender trait developed to pathological extremes. Mild adult cases can often be seen with notebooks and cameras at the far end of railway platforms or peering through aerodrome perimeter fences. These mild cases can often develop 'collecting' and other obsessions to extremes. Newton, it seems, had this autistic spectrum disorder and had few or no social skills; a real Norman Bates – No Mates – character and it is to this man that we owe our ignorance of Robert Hooke's genius for well nigh three hundred years. For example, Hooke developed a calculating engine well before Leibnitz and certainly well before Babbage. Had this contrivance and its design not been trashed by Newton, western science would have no doubt proceeded apace.

Much is now coming to light about Robert Hooke, thanks to researchers such as Stephen Inwood (cf. 'The Man Who Knew too Much', MacMillan 2003, ISBN 0-333-78286-0). Hooke was born in 1635 at Freshwater on the Isle of Wight. How could anyone coming from such a place *not* conceive of the Earth's sedimentary strata as being history read as the pages of a book? Hooke never doubted that the 'formed stones' (i.e. fossils) were the remains of former living creatures. In 1668 Hooke delivered to the Royal Society his 'Lectures and Discourse on Earthquakes'. His theory of the piling-up of

sediments and their subsequent collapse or slippage was an attempt to describe earthquakes. He also described uplift and erosion and thus demolished the myth of the biblical flood in that he formed a theory as to why marine fossils could be found inland. After all, he had observed fossil shellfish remains high in the rocks of the Downs on the Isle of Wight. Hooke suggested that it would be possible to 'raise a chronology out of and... state the intervals of the times wherein such... Catastrophes and Mutations have happened.' Here then is the true father of historical palaeontology. Perhaps we should thank Newton for the fact that Hooke wasn't persecuted as a heretic!

The one great geological contemporary of Hooke was the Dane, Nils Steensen, aka Niklaus Steno. Steno carried out fieldwork on fossil successions in Italy though was constrained by his strong religious convictions to condense his geological time scale to fit Old Testament 'facts'. Steno soon after abandoned geology and became a priest and so concepts such as the Noachian Flood won. Steno, like Hooke, did however establish the principle of superposition.



In the 1300s the Frenchman Jean Buridan suggested that earth history had a cycle of 'a hundred thousand million years perhaps' and that this amount of time was 'required for all the planets, stars, sun and moon to return to

their original configuration in the sky'. That's refreshing thinking in an era when English monarchs (well, one anyway) met their demise through the insertion of a red hot poker in their fundament – it was also dangerous thinking when biblical orthodoxy came down like a ton of bricks on anyone who dared to suggest that the natural order of things was other than the printed dogma of the bible. This French philosopher is perhaps best known for 'Buridan's Ass'; this concerns a theoretical and potentially starving donkey and if you want to know more you're going to have to look it up yourself! Suffice to say that Buridan was a student of William of Ockham, of Occam's Razor fame.

Was Robert Hooke familiar with Buridan's writing? Hooke was an avid bibliophile and the answer is perhaps 'yes'. Buridan destroyed the Aristotelian idea that Earth history repeated on a 36,000 year cycle. Buridan's reasoning was that a quarter of this cycle of change would be expected since the time of the Ancient Egyptians. Obviously, in 6,000 years historical records show no major orogenies, transgressions or recessions. Hooke developed theories concerning such time frames and polar wandering due to precession. The Monument in Pudding Lane, London, was Hooke's observatory for the measurement of this phenomenon. Not so long ago, Section C listened to a talk linking precession and other Earthly wobbles to repeated sedimentary deposition and climatic patterns...

Now, let's see if we can get back to the plot, if there ever was one. Gresham College exists today, though at premises in Holborn. The original college, which survived the Great Fire, has long gone and stood close to where the Westminster Tower is today, at the corner of Old Broad Street and Wormwood Street. The Royal Society's HQ today is at Burlington House, off Piccadilly and was in the news recently over the non-appointment of Lady Susan Greenfield, baroness and Member of the House of Lords. Susan Greenfield is perhaps better known as Director of the Royal Institution and Oxford Professor of Pharmacology and for her work on Alzheimer's disease. Lady Greenfield's rejection by the Royal Society was the only name to be leaked from the 535 original nominations for this year. Ah, I hear you say, a whiff of testosterone emanating from Burlington House? Or could it be a touch of Asperger's, or both? In Rudyard Kipling's 1901 story 'Kim' you'll find this: 'Nine men out of ten would flee from a Royal Society soiree in extremity of boredom.' In this politically correct and enlightened day and age it's all a bit embarrassing. I recall that Jocelyn Bell, discoverer of pulsars, got the slow-hand clap from her undergraduate

classmates whenever she attended physics lectures – she was the only female undergraduate. Not only that, Jocelyn Bell didn't get the credit for her discovery through Nobel Prize recognition – her supervisor did! I could develop this theme further by mentioning Rosalind Franklin, the real discoverer of the helical nature of the DNA molecule. However, I shall return momentarily to the autism spectrum disorder mentioned above. In 1944 Hans Asperger wrote of the extreme male brain, 'The autistic personality is an extreme variant of male intelligence. Even within the normal variation, we find typical sex differences in intelligence... In the autistic individual, the male pattern is exaggerated to the extreme.' It wasn't until 1997 that his hypothesis was fully researched and dubbed a syndrome.



The original Gresham College before it was demolished

Over a thousand years before Robert Hooke's time Hilda, Abbess of Whitby, was busy dealing with a local snake population explosion. The story is that nuns would not dare to venture out of the priory for fear of the snakes. Hilda is reputed to have decapitated a good many (of the snakes) throwing the dead serpents over the cliff. Enterprising local craftsmen carved snake-heads onto fossil ammonites found in the cliff and these 'formed stones' were sold as evidence of the miracle performed by St. Hilda

in ridding the place of snakes. Such nonsense persisted for a long, long time to explain fossil remains, the Devil's Toe-nail being a good example. That is, until someone comes along with a fresh, science-based approach, like Robert Hooke. Mind you, recently there was the Fred Hoyle – *Archaeopteryx* debacle, but that's another story.



Hildoceras bifrons

Graham Stocks

AGM Report 2004

The AGM held on March 24th 2004 was one of the best attended for many years, in fact as long as many can remember, and served to confirm that the Section is in very healthy shape right now. The business of the evening ran very smoothly, and it was with sighs of relief all round that we at last could announce a new treasurer to take over from Joanne Norris, who had held the post temporarily after Keith Smithson was unable to take the reins following his illness. Our new treasurer is Eileen Johnson, and she will be very happy to receive your subscriptions for 2004-5, if you have not already paid them. Her contacts are on the back of this Charnia. I would remind members that subs are due each year from the date of the AGM, and a reminder slip has been sent to all members either by post or electronically. Please help us by paying your subs promptly.

Other comings and goings were in the publicity department where Paul Monk exited the Publicity Officer's role and Mark Purnell took over, and we

also welcomed Helen Jones onto the committee. Roy Clements was co-opted back onto the committee at the conclusion of his permitted two years as a full committee member, and Robert Tripp was also co-opted. All these changes are shown on the back cover of this Charnia.

The Chairman had one piece of unwelcome news, and that was the end of the Section's meetings in the Geology Department, due to University policy. See the Chairman's Report for more details. The balance sheet for 2003-4 was distributed at the meeting and approved, and is reproduced below.

Leicester Literary and Philosophical Society Section C Geology
STATEMENT of ACCOUNTS 24 MARCH 2004

Receipts	2003-4	2002-3	Expenditure	2003-4	2002-3
Cash in hand	£ 22.63		Stamps	£ 54.96	£ 128.10
BS Balance	£ 630.19	£ 596.56	Stationery	£ 10.53	£ 19.07
			Geologist Association Fees	£ 55.00	£ 22.00
Subscriptions	£ 715.00	£ 532.70	Charnia printing	£ 151.40	£ 83.19
Interest	£ 3.57	£ 4.34	Speakers Expenses	£ 225.23	£ 151.40
Sale of Coffee	£ 32.19	£ 33.42	Website	£ 54.47	£ 52.89
Donations	£ 3.00	£ 10.00	Photocopying	£ 12.00	
			Insurance	£ 125.00	£ 57.75
			Coffee	£ 2.27	
			BS Balance	£66.76	
			Cash in Hand	£16.26	£ 716.12
				£ 716.12	£ 652.82
	£ 1,406.98	£ 1,177.02		£ 1,406.98	£ 1,177.02

Handwritten signature and date: 24.3.04

Chairman's Report for 2003-4, given to the AGM on March 24th 2004

2003-4 was another excellent year for the Section. Both summer and winter programmes proved very successful, and we were blessed with some lovely weather while in the great outdoors. The highlight of the summer programme was undoubtedly the weekend excursion to Suffolk, based in the pleasant town of Woodbridge. We were there over midsummer's day, and enjoyed quintessentially English weather and landscape, and excellent Tertiary geology. The attendance broke our existing record for a field trip in recent years, at over 30. The newly instigated society meal on the Saturday evening proved very popular, and looks like it may become a regular event on the weekend trip. Our day trips to the Sedgwick Museum, the Triassic

rocks of Nottingham, Bradley Fen Quarry and its Oxford Clay, and the Jurassic of Tilton and Holwell also went extremely well, and were well supported in the main, but we could always stand a few extra participants. Many thanks to all the leaders associated with those trips, and to Dennis Gamble for his organisation.



Sunshine and shadow in the depths of Tilton Railway Cutting

The winter programme was equally successful, but everything was not without incident, as we were obliged to find a replacement speaker at the last moment on November 19th (many thanks to Section member John Dickinson for stepping into the breach), and the meeting of January 28th very nearly succumbed to the freezing snowy weather on that day. Full marks to Diana Sutherland for battling through to speak to us, and also to the 12 hardy souls who equally bravely managed to get there to form the audience. The greatest shame was that Diana's excellent talk on the building stones of Northamptonshire was heard by such a small gathering, and we are taking steps to remedy that. Probably the coup of the season was persuading Professor Simon Conway-Morris to travel up from Cambridge to address us. Simon is without doubt one of the highest profile geologists in the country,

and is always splendid value for money with his innovative, stimulating and progressive ideas. Fittingly, his talk attracted our highest attendance of the season, 61.

On other nights Jane Francis gave us a splendid virtual excursion to Antarctica, we went mammoth hunting with Neville Hollingworth, grappled with the complexities of orbital forcing with Graham Weedon, revisited East Anglian geology with Jan Zalasiewicz, travelled with Murchison to Russia led by Michael Collie, experienced the difficulties of hominids trying to cope with a world changing around them with Mark Maslin and finally came to rest much nearer home at the AGM with an armchair visit to Southam (Long Itchington) Quarry, one of our local geological highlights.



Section C at Southam (Long Itchington) Quarry, summer 1993

Jane Evans from the British Geological Survey was a splendid speaker for the Parent Body lecture in January and demonstrated convincingly just why isotopes can tell us so much about the life of the past. Vice-chairman Mark Evans took on the onerous task of organising this year's Saturday School at Vaughan College, and was rewarded by a first class day of very well delivered talks on the subject of Mesozoic swimming and flying reptiles. The Christmas meeting in the Museum was as enjoyable as ever, but sadly,

was not quite as well supported as we'd hoped. Perhaps this new season when the date will fall a little further away from Christmas, the meeting will get the attendance it deserves. In contrast, the Member's Evening in February was well attended and engendered its usual relaxed and friendly atmosphere.



Member's Evening at the New Walk Museum, 12.2.03

As for your committee, they have all worked hard for the Section's benefit, but I must single out Joanne Norris for special mention, for as well as continuing her excellent job as Secretary, she also took on the exacting role of Treasurer when it was clear we could not find a replacement for Doug Lazenbury. I think that the fact that hardly anyone commented on the change or noticed what had happened, is a true testament to how well she coped. We now welcome Eileen Johnson as our new treasurer, and wish her all the best in her key role in the Section. Dennis McVey has diligently kept our excellent website updated. Please log on as often as you can (charnia.org.uk), as this may help the search engines prioritise us in searches. We are sad to lose the services of Paul Monk as Publicity Officer, and thank Paul for keeping the events of the Section in the public eye. His

successor, Mark Purnell, has wide experience of promotional strategies and should prove an invaluable addition to the officers. Finally we welcome Helen Jones onto the committee for the first time.

I must close on a more serious note, for it has been decreed that we will have to quit the Geology Department for the start of the new winter season in October. We have enjoyed 8 happy years there, but the University is enforcing its policy of centralising the meetings of groups around the campus in the Ken Edwards Building, and will no longer provide free portering for other venues. Thus, the Section would have to pay for porters in the Bennett Building, an expense that is beyond our means. The university is not in favour of 'self-portering' and it is unreasonable and unwise for us collectively or as individuals to take on responsibility for the security of the building and personal safety. The good news is that the KEB is an excellent venue, is located very close to the Geology Dept, and would be free. I will keep you posted on developments.

Andrew Swift

Summer Programme 2004

Please confirm these trips and your proposed attendance with Dennis Gamble, 0794 7725361

Saturday May 15th Latton and Kent End quarries, near Cirencester. Quaternary, Kimmeridge Clay and Oxford Clay. Led by Dr Neville Hollingworth (NERC, Swindon)

Friday May 21st – Sunday May 23rd (weekend) The Lower Palaeozoic of the Builth Wells area. Based in Builth Wells. Led by Dr Gary Mullins and Andrew Swift (both Dept of Geology, University of Leicester)

Sunday June 13th Dunton Bassett gravel pit. Led by Dr Jan Zalasiewicz.

Sunday July 11th Northamptonshire villages and quarries to see (Jurassic) building stones. Led by Dr Diana Sutherland

August Blockley Quarry, near Moreton-in-Marsh. Date and leader TBA

September Northampton Museum. Date TBA

Programme of indoor meetings 2004/2005

All held at 7.30pm on the Leicester University campus, probably Lecture Theatre 3, Ken Edwards Building, except where stated. Final confirmation of venue awaited.

Details: Chairman Andrew Swift, 0116 2523646, as48@le.ac.uk

Wednesday October 6th

Dr Simon Lewis (Queen Mary College, London) – Title TBA. Theme: Quaternary and/or hominids

Wednesday October 20th

Sue Beardmore (ex-Utah Museum of Natural History, USA) – 'Letters from America: fossil excavations in Utah, USA'

Wednesday November 3rd

Professor Ian Fairchild (School of Geography, Earth and Environmental Sciences, University of Birmingham) - 'Underground secrets'

Wednesday November 17th

Dr Ian Sutton (School of Continuing Education, University of Nottingham) - 'The geological setting of New Zealand'

Wednesday December 1st

Dr Jason Hilton (School of Geography, Earth and Environmental Sciences, University of Birmingham) – Title TBA. Theme: Palaeobotany

Wednesday December 15th

Christmas meeting, to be held at the **New Walk Museum**, Leicester

2005

Wednesday January 12th

Barry Hunt (IBIS Ltd., London) – Title TBA. Theme: Building Stones

Wednesday January 26th

Professor Dick Merriman (BGS, Keyworth) - 'The role of clay minerals in recycling crustal rocks'

Wednesday February 9th

Members evening, to be held at the **New Walk Museum**, Leicester

Monday February 21st

Parent Body Lecture, to be held at **New Walk Museum**, Leicester. Speaker and title TBA.

Wednesday February 23rd

Speaker and title TBA

Saturday March 5th (whole day)

Saturday School. 9.30 am - 5.00 pm. Theme TBA

Wednesday March 9th

Speaker and title TBA

Wednesday March 24th

AGM and Chairman's address - Andrew Swift (Department of Geology, Leicester University) – 'Geological highlights of the Midlands. 3. Ketton Quarry, Stamford'

Field Excursions of other societies

LLPS Natural History Section. Attendance on these field trips is subject to spaces being available, please check with the Section first, also for fuller details. A charge of £1 will be made for non-members to cover insurance requirements.

Saturday May 22nd Charnwood Lodge

Saturday June 5th Lyndon Reserve, Rutland Water

Saturday June 19th Kelham Bridge Reserve

Wednesday July 7th Lea Meadows Reserve

Saturday July 17th North Farm, Shenton

Saturday July 31st Ashby Canal

Saturday August 14th Gumley & Foxton churchyards

Friday August 20th Foxton Locks. 8.00pm

Sunday September 19th Collyweston Great Wood Reserve. Joint meeting with BPGS

Sunday October 17th New Lount Reserve

East Midlands Geological Society. Contact: Janet Slatter, EMGS Secretary, j.slatter@zoom.co.uk

Sun, 23rd May The Permo-Triassic of north Nottinghamshire

Wed, 9th June The building stones of Stamford

Wed, 23rd June Some aspects of the mineralogy in the Ashover area

Sun, 11th July The reef margins of the Castleton area

Sat 31st July & Sun 1st August Weekend excursion to the Yorkshire Dales

Sun, 19th September Day excursion to the Charnwood area

Yorkshire Geological Society. Contact: Dr Trevor Morse 01833 638893, e-mail: tjm4@tutor.open.ac.uk

Sunday May 23rd Bowlee picnic area and Low Force

Sunday June 19th Magnesian Limestone of NE England

Saturday July 24th Dinosaur tracks from the Middle Jurassic of the Yorkshire coast

Sunday August 8th Glacial erratics of Holderness

Saturday September 25th Geology of the area around Scunthorpe

Stamford and District Geological Society. Contact: Bill Learoyd, 01780 752915.

Saturday April 4th – Sunday April 5th Weekend in Dorset

Saturday May 1st & Saturday May 8th Ketton Trail clean-up

Saturday June 26th Lincolnshire Wolds

Saturday July 17th Bradley Fen Quarry

Saturday August 14th A hard rock quarry in Leicestershire (TBA)

Thursday August 26th 7.00 pm. Ketton Quarry

Saturday September 11th Middlegate Quarry & Frodingham Ironstone

Saturday October 16th Sedgwick Museum, Cambridge

Central Branch of the Russell Society. Contact: Neil Hubbard, 01509 414427

Saturday April 4th Quarry near Oswestry

Saturday May 1st Quarry near Mountsorrel

Saturday May 22nd Quarry near Breedon

Saturday June 12th – Sunday June 13th Leadhills/Wanlockhead

Sunday June 20th Quarry near Markfield

Sunday July 4th Quarry in Powys

Saturday September 4th Quarry near Coalville

Saturday October 2nd Quarry near Crich

Warwickshire Geological Conservation Group. Contact: Christine Hodgson, 01926 511097

Saturday March 27th & Sunday March 28th Shropshire weekend
Saturday April 3rd Edgehill Quarry
Friday April 30th – Monday May 3rd Bude weekend
Saturday May 15th Griff Quarry, Nuneaton
Wednesday June 9th RIGS, Milverton
Wednesday July 14th RIGS Rowington and Henley
Sunday September 12th Geopark Day, Abberley and Malvern Hills
Friday September 24th – Sunday September 26th Welsh Borderland weekend

Saturday School 2004

Not walking with dinosaurs: the swimming and flying reptiles of the Mesozoic

Vaughan College, Leicester, 21st February 2004

Everybody knows about the dinosaurs in some way or another, whether it's *T rex* or *Velociraptor*, or even our local *Cetiosaurus*. However, the dinosaurs were not alone on the Mesozoic Earth. This year's Saturday School cast the spotlight on the often overlooked contemporaries of the dinosaurs; the reptiles that swam in the seas and flew in the air. Some of these have become more familiar in recent years through television series like the BBC's "Sea Monsters" and "Walking with Dinosaurs". However, there are many more out there which didn't make the screen test for the TV makeover. My aim when putting together the meeting was to give a taste of the great diversity of marine and flying reptiles. There was an awful lot to cover, and some fascinating fossil animals only got a few sentences. Others got a more in-depth treatment, with an account of some recent findings. Our speakers, Darren Naish, Will Watts, Mark Evans (I couldn't resist it), Richard Forrest, Dr Leslie Noè, Dr Dave Martill and Lorna Steel, were assembled from as far a field as the Isle of Wight and North Yorkshire, and met with 55 delegates at Vaughan College in Leicester.

The ancestors of both marine and flying reptiles were terrestrial, and so adaptations for moving and feeding in air and water formed a theme for the meeting. Darren Naish's whistle-stop tour of marine reptiles certainly brought everybody up to speed. The following sessions looked in greater

detail at the two major groups, the ichthyosaurs and plesiosaurs. Any perceived bias of the meeting towards the latter group is obviously nothing to do with my own particular interests (well, perhaps a bit), but really is a result of the relatively large number of people working on these animals, compared to the other groups. Vertebrate palaeontologists are thin on the ground, despite the great interest of the general population in things saurian.



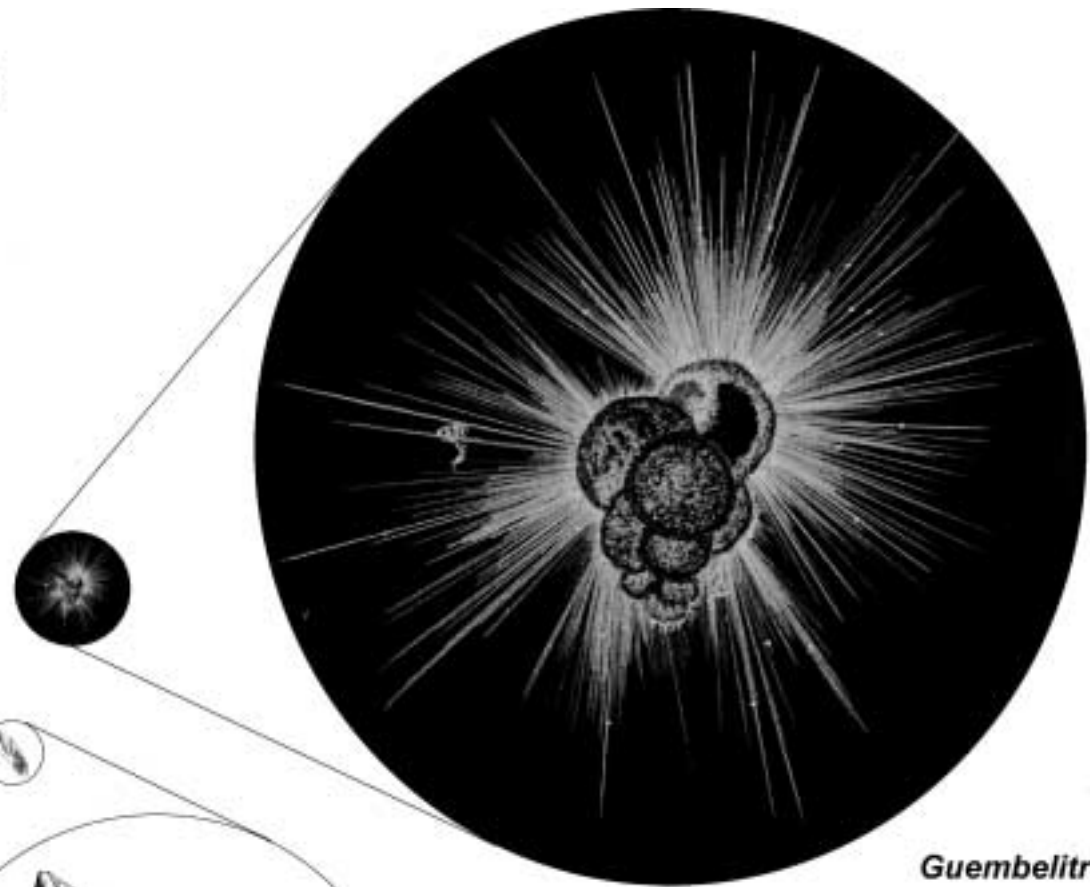
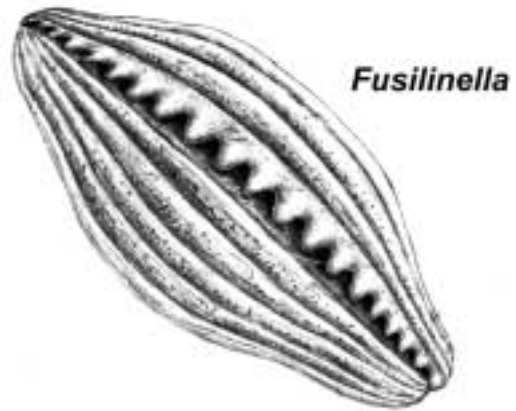
Saturday School speakers. From l to r: Darren Naish, Dave Martill, Richard Forrest, Lorna Steel, Lesley Noe, Arthur Cruickshank (one of the chairmen), Will Watts and Mark Evans

The last two talks of the day looked at the pterosaurs, the first vertebrates to really conquer the air. Recent discoveries have revealed them to be much more bizarre than we had previously thought. Some look at if they could never have existed, let alone actually have flown. I hope that all those who came to the meeting went away with a better idea of what was swimming and flying alongside the dinosaurs. For those who couldn't make it, abstracts for the meeting can be found on the website.

In addition to thanking the speakers for an excellent day, I would like to thank Andrew Swift and Arthur Cruickshank for chairing the sessions, and the staff at Vaughan College. Watch out for news of next year's Saturday School!

Mark Evans

Foraminifera



Uvigerina

