



**Circular 358
APRIL 2005**

Registered Charity No: 503617

President: Ian Thomas

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INDOOR LECTURE PROGRAMME - SPRING 2005

Saturday, 23rd April 2005 - 6.30 pm

A Very Big Fish Records the Jurassic Climate

Speaker: Dr Dave Martill (University of Portsmouth)

Saturday 23rd April 2005

A Very Big Fish Records the Jurassic Climate

The giant pachycormid fish *Leedsichthys problematicus* Woodward is known from the late Mid Jurassic of the UK, France and Germany. Specimens referred to the genus *Leedsichthys* have also been reported from the early Late Jurassic of the Andean region of northern Chile. Such a wide distribution for the genus may merely indicate that this magnificent animal had a very wide range and may have been common around the globe. However, recent discoveries at Whittlesey, near Peterborough, and a re-examination of material collected during the latter part of the nineteenth century demonstrate a marked episodic growth pattern revealed by conspicuous growth bands on the internal surfaces of many of the skull and axial bones. Such growth lines are difficult to interpret. Explanations might include seasonal migration, perhaps between hemispheres, a period of torpor during the summer, perhaps related to gillraker dental renewal, or simply marked seasonality in north-west Europe in the Mid and Late Jurassic. Whatever the case, *Leedsichthys* was probably the world's largest bony fish, but its palaeoecology may remain a mystery for some time.

LECTURE VENUE

Meetings will take place in lecture theatre B3 of the Biology building at the University of Nottingham. If you require to use the lift to B3, please speak to the security attendant who will assist you. B3 is equipped with induction loop hearing assistance. If you are attending meetings or joining a coach at the University of Nottingham, enter from the South Entrance on University Boulevard. Cars should be parked in the car park on the bend in the road just beyond the security point after Science Road. The entrance to the Biology building is at the right hand side of the rear of this car park.

FIELD PROGRAMME - SPRING & SUMMER 2005

15th May 2005 - 10.30 am

The Jurassic Ironstones of Leicestershire and Rutland

Leader: Keith Ambrose

8th June 2005 - 6.00 pm

The Stones of Southwell Minster and Bishops Palace

Leader: Ian Thomas

22nd June 2005 - 6.30 pm

Walls Across Britain

Leaders: Ian Thomas and John Brown

6th July 2005 - 6.30 pm

Jurassic Building Stones, Notts/Leics. Border

Leader: Albert Horton

17th/18th September 2005

Weekend Excursion to North Wales & Anglesey

Sunday, 15th May - 10.30 am

The Jurassic Ironstones of Leicestershire and Rutland

Leader: Keith Ambrose

Meet at the Brown's Hill Quarry, Holwell, near Melton Mowbray at 10.30 am. Map Ref: SK 742236.

Full day field trip

We will be examining the facies changes in the Marlstone Rock Formation across Leicestershire and Rutland, and also looking at the Northampton Sand Formation.

I propose to visit four localities. We can do two localities in the morning and two in the afternoon. We will proceed from Holwell to a disused quarry at Pickwell, then go on to Tilton Railway cutting and finally to Neville Holt to look at the Northampton Sand. There will be no need for special clothing; hard hats are advisable; Tilton cutting can get a bit muddy if there has been a lot of rain.

The Marlstone Rock Formation of Leicestershire and Rutland shows a very localised southward facies change across the counties. In the north of Leicestershire, around Holwell, it consists exclusively of an ooidal iron grainstone. It is composed of fine-grained ferruginous ooids with varying amounts of shell debris and whole shells. Crinoid debris is locally common and the typical nests of brachiopods can be seen although not readily at Holwell. Cross bedding is locally well developed and south easterly flowing currents predominate. This facies continues northwards to mid Lincolnshire. South of Melton Mowbray, the ooidal iron grainstone becomes interbedded with ferruginous limestone and this can be seen at the Pickwell locality. Continuing southwards, the Marlstone develops into a two fold subdivision with an upper ooidal iron grainstone and a lower ferruginous limestone. The section at Tilton shows a local variation to this facies in that the lower ferruginous limestone is very sandy and locally a calcareous, ferruginous sandstone. The sequence here is also characterised by three distinct beds that are rich in brachiopods. The Marlstone also has a basal pebble bed locally. This can be seen at Tilton but not at Pickwell or Holwell. The exposures at Holwell and Tilton expose both the underlying Dyrham Formation and overlying Whitby Mudstone Formation, which will be examined. At Holwell, only the uppermost c.0.5m of the Dyrham Formation are exposed, here represented by a fine-grained sandstone, the former 'Sandrock' of past workers. This unit has been included in the Marlstone by some workers. At Tilton, we will see the more typical micaceous siltstones and a bed of limestone. The Whitby Mudstone shows typical blocky and fissile, fossiliferous mudstones, the sequence at Tilton also showing a bed rich in non-calcareous ooliths. The Northampton Sand at Neville Holt is very similar to the Marlstone and is a fine-grained ooidal iron grainstone that shows variable degrees of cementation and some well developed box ironstone weathering.

Wednesday, 8th June - 6.00 pm

The stones of Southwell Minster and Bishops Palace

Leader: Ian Thomas

Meet at the main door, Southwell Minster, Southwell, Nottinghamshire

Southwell Minster is a gem famed for its leaf carvings in stone. Although lacking the grandeur of Lincoln, it ranks as perhaps the most attractive church in the East Midlands. Whereas acres of print have been devoted to the history and architecture, the Minster and the neighbouring palace ruins exhibit a fascinating largely untold story in stone from the earliest portions dating back to the twelfth century through to the modern memorials. These involve both local and exotic sources. The tour will include a discussion of the Mansfield v Mansfield Woodhouse origins of the main stone used. Reference will be made to documentary and petrological sources to untangle this story. The inside will be explored first, we will then move outside.

PLEASE NOTE: We must have an early and prompt start to accommodate later church services.

Wednesday 22nd June - 6.30 pm

Walls across Britain

Leader: Ian Thomas and John Bown

Meet at Discovery Centre, National Stone Centre (NSC), Wirksworth, Derbyshire (entrance off B5035 Cromford-Carsington Road at SK 285 555). Limited parking adjacent to Discovery Centre - when full, park in main car park.

Dry stone walls are an intrinsic part of our upland landscapes but how old are they? Are they all the same? Who built them and why? The visit will take a detailed look at the nineteen sections of the Millennium wall, illustrating styles and materials from Caithness to the South Wales Valleys. It will examine how methods and available materials differ and relate to each other and to the functions of the

wall. The NSC, working with the virtual “College of the Peak” and “Walls for the Future” is hosting the UK’s first accredited NVQ courses in dry stone walling. NSC already provides stone carving/sculpting courses and is expanding training to cover masonry, lime-related skills and “stone slate” roofing. John Brown, former Vice President of the Dry Stone Walling Association GB, will demonstrate walling techniques and will describe some of his research into the detailed history of walls in Ashover Parish, Derbyshire.

Wednesday 6th July - 6.30 pm

Jurassic Building Stones, Notts/Leics. Border

Leader: Albert Horton

Meet at Village School, Main Street, Willoughby on the Wolds, South Notts. midway between Nottingham and Leicester. Just off the A46; just off the B676 Loughborough-Melton Mowbray Road.

NB: Please park facing east (i.e. towards A46).

This excursion provides an opportunity to study the lithology, sedimentology and weathering characteristics of rocks which are no longer well-exposed locally. The churches of Willoughby on the Wolds (635 254) and Upper Broughton (683 263) are built mostly of “Blue Lias” and the Middle Lias “Sandrock” respectively. In addition, Lincolnshire Limestone, Bulwell Stone and Millstone Grit are also

used. The changing architectural style and use of stone from Norman times to the present will be discussed.

The meeting involves the use of private cars travelling from Willoughby to Upper Broughton (pub food available at the latter if required).

Saturday 17th & Sunday 18th September

Weekend Excursion to North Wales & Anglesey

Leader: Allan Brandon

Further details will appear in the next Circular.

Please will members book for all excursions as this gives the leaders information they need for preparation of hand-outs, access permission etc.

Where a member has to cancel a booking it is requested that they contact Ian Sutton (0115 923 2360) as early as possible.

Insurance and Safety

Members are reminded that the Society has only public liability insurance and that personal accident insurance is a matter for individual members to arrange as they consider necessary. Up to date hard hats are obligatory for all field excursions involving quarries or cliff faces and strongly recommended for all trips. High visibility clothing is sometimes required in working quarries. High visibility tabards can be obtained from GA Enterprises, 126 Fleetside, W. Molesey, Surrey KT8 2NQ at £4.70 incl. pp. Members without suitable hard hats may be refused access to certain sites! Hard hats can be obtained from many Builders’ Merchants, Wickes, B&Q Warehouse etc. for about £4.

Any non-members attending field excursions will have to pay a temporary membership fee of £2.00 and all participants are reminded that they must comply with any instructions from excursion leaders or, for example, quarry managers or their employees on Health & Safety issues.

Subscriptions

Subscriptions were due on 1st February 2005. The rates remain the same as last year. If you have not already paid, please send your subscription to the Treasurer as soon as possible to ensure you continue to receive notice of Society Lectures and Field Meetings and your copy of the Mercian Geologist. Please also consider paying your subscription by way of a Standing Order and with Gift Aid declaration. It costs you nothing but benefits the Society considerably and helps to keep our subscription rates down. Copies of both forms are available from the Treasurer.

Subscription rates are: £12.00 ordinary
 £15.00 joint membership
 £ 5.00 student membership

Council Members

At the recent AGM in March, the following were elected to serve on Council for the coming year:

President:	Mr Ian Thomas
Vice President:	Mr Tony Morris
Secretary:	Mrs Janet Slatter
Treasurer:	Mrs Christine Moore
Editor:	Dr Tony Waltham
Field Meetings	Dr Ian Sutton
Indoor Meetings:	Dr Beris Cox
Circular Editor:	Mrs Sue Miles

Other members of Council:

Mr John Travis; Mr Robert Littlewood; Dr Richard Hamblin, Professor Gerry Slavin; Mr John Wolff, Mr Gerry Shaw.

New Members

Mr Steven Wheatcroft, Kilburn, Derbyshire.
Miss Katerina Braun, West Bridgford, Nottingham
Mr Christopher Jack, Nottingham
Mr D J Vincent, Heanor, Derbyshire
Mrs J Wells, Woodhall Spa

EAST MIDLANDS FIELD GUIDE

Members of EMGS may purchase these at a discount price of **£6.00.** To non-members the price is **£8.00.**

Copies are available for sale from the Secretary or other Council members, or at the Society's Indoor or Field Meetings.

Lectures & Field Meetings of Other Organisations

The Secretary or the Circular Editor have contact details for the representatives of other local Geological Societies who organise field trips and indoor meetings. Please ask one of them for details.

e-mail addresses

We would very much like to send you your Circular by e-mail. If you have not already done so, please send your e-mail address to the Circular Editor, sue.miles@freethcartwright.co.uk.

Please can you also confirm your name and address when sending your e-mail so we can correlate these details with our membership listing.

The next Circular will be published in July 2005.

The next Council Meeting will be held on Wednesday 20th April 2005.

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