

YORKSHIRE GEOLOGICAL SOCIETY

President: Professor Pete Rawson

Circular 511



A Registered Charity
No. 220014

THE MICHAEL HOUSE MEMORIAL MEETING



Pectinates hudletoni from the
Kimmeridge Clay of Golden Hill
Vale of Pickering, shown at
natural size.

14.00 to 16.55 SATURDAY 18TH OCTOBER 2003
DEPARTMENT OF GEOGRAPHY, COHEN BUILDING, HULL UNIVERSITY,
HULL, EAST YORKSHIRE

NON MEMBERS WELCOME

THE MICHAEL HOUSE MEMORIAL MEETING

(joint meeting with the Hull Geological Society)

- 14.00-14.05 Chairman's Introduction and Society announcements
- 14.05-14.15 Introduction to the life and work of Professor Michael House
Professor John Neale University of Hull
- 14.15-14.45 Kimmeridge and Portland - two centuries of geological heritage
Professor John Cope, Department of Earth Sciences, University of Cardiff.
- 14.45-15.15 Evolutionary pathways in the evolution of
Early and Middle Devonian ammonoids.
Professor Dieter Korn, Humboldt Museum, Berlin.
- 15.15-15.50 Tea and coffee.
- Display of Devonian goniatites, David Hill
Solution features in the Cave Oolite at North Newbald, members of
Hull Geological Society.
- 15.50-16.20 The Taghanic Event: A Late Mid Devonian Aridity Crisis
Dr. John Marshall, School of Oceanography and Earth Sciences,
University of Southampton.
- 16.20-16.50 Stratigraphic records of Milankovich cycles in British Jurassic
Dr Graham Weedon, University of Luton
- 16.50-16.55 Closing remarks

A WORD FROM THE PRESIDENT MEMBERSHIP NEWS

We are delighted to welcome Christine Jennings-Poole as our new Membership Secretary, following our appeal for help in the last (Field Meetings) circular. Chris graduated in Geology at the University of Hull and has been a member of our Society for many years. She currently works for the NHS, in a Primary Care College hosted by the North Tees Primary Care Trust. Our current secretary, Sheila Rogers, will stay in the post until February, to cover the period when the Annual Subscriptions for 2004 are collected. The Society is immensely grateful to Sheila for her dedicated work over the last 12 years, during which our membership records have been maintained with rigorous care.

For many years our Annual Dinner was organised by Mavis May, who eventually handed over responsibility to Jo Manning. Jo has now moved to Bath and Mavis has kindly agreed to look after this year's event. But we would be very pleased to hear from anyone who would be willing to organise the dinner in future. It is always held in York after our December AGM and is a very special occasion to many of us.

The Council will soon be starting on the next cycle of monthly meetings and one of the most important issues that we will be looking at will be how to increase our membership, and therefore our income. At present a significant proportion of our income is spent on the *Proceedings*, but the proportion decreases as membership numbers rise. Thus any additional income generated will allow us to provide more services to members, such as newsletters and field guides. Any suggestions will be welcome: please Email: p.rawson@ucl.ac.uk, or write to me at: Department of Earth Sciences, University College London, Gower Street, London WC1E 6BT.

Pete Rawson, President

INTRODUCTION TO THE LIFE AND WORK OF PROFESSOR MICHAEL HOUSE

Professor John Neale, University of Hull

KIMMERIDGE AND PORTLAND TWO CENTURIES OF GEOLOGICAL HERITAGE

Professor John Cope, Department of Earth Sciences, University of Cardiff

No Abstract Provided

EVOLUTIONARY PATHWAYS IN THE EVOLUTION OF EARLY AND MIDDLE DEVONIAN AMMONOIDS

Professor Dieter Korn, Humboldt Museum, Berlin

The principal conch parameters whorl expansion rate, whorl overlap rate, umbilical width, and whorl thickness of Early and Middle Devonian ammonoids have been extensively investigated. Stratophenetic analyses show long-term trends in the transformations of these characters over long periods of time, but sudden and rapid reversals can also be observed. On the basis of these four quantifiable conch parameters and supplementary qualitative characters, ten ammonoid morphs were distinguished. Reconstruction of the evolutionary history of these Devonian faunas. The agoniatitid lineage is characterized by slow character development and leads to the Frasnian gephuroceratids; the anarcestid lineage displays rapid morphological evolution that leads to the late Givetian pharciceratids as well as the Middle and Late Devonian tornoceratids. Morphological evolution is interpreted as partly limited by geometrical and physical constraints. Characterized by slow character development and leads to the Frasnian gephu oceratids; the anarcestid lineage displays rapid morphological evolution that leads to the late Givetian pharciceratids as well as the Middle and Late Devonian tornoceratids. Morphological evolution is interpreted as partly limited by geometrical and physical constraints.

DISPLAY OF DEVONIAN GONIAITITES, DAVID HILL

SOLUTION FEATURES IN THE CAVE OOLITE AT NORTH NEWBALD MEMBERS OF HULL GEOLOGICAL SOCIETY

In the north face of Sands Top Quarry, North Newbald, East Yorkshire, solution features can be seen in the top of the Cave Oolite (Bajocian, Middle Jurassic), beneath silts and sands. The features vary in shape and size from thin pipes 2 m deep, to U and V shape holes and 'channel-like' features a couple of metres across. Some of these still contain infill. The sands and silts above contain no carbonate material. A 'V' shaped feature on the eastern face is in weathered Oolite and may be an ice wedge cast. Samples have been collected and the latest results will be displayed at the meeting.

THE TAGHANIC EVENT: A LATE MID DEVONIAN ARIDITY CRISIS

Dr John Marshall, School of Ocean and Earth Sciences, University of Southampton.

An enormously significant but generally unrecognised contribution to the earth sciences has been that of the palaeontologists and stratigraphers who put the definition of geological time onto a systematic basis. In the definition of Devonian time Michael House was foremost amongst this group. This systematic division then enabled geologists (again including Michael House) to start to recognise the global scale of geological events such as extinctions and sea level highs. This contribution focuses on one such Devonian event well known to Michael House. The latest Givetian (late Mid Devonian) Taghanic Event is the first of a series of extinctions events that characterize the Late Devonian to Early Carboniferous interval. Continuing work on terrestrial sediments from the Old Red Sandstone continent enables these events to be contrasted and reveals much about the underlying causes. The marine Taghanic Event in Scotland has its expression as a limestone found in a few offshore oil exploration wells and represents an extreme sea-level highstand. In terrestrial sections the equivalent level is the Eday Marl well known from Orkney. Offshore its correlative is found in many wells drilled north of the Highland Boundary Fault. These have generally been mis-identified as a Permian siltstone. Onshore sections show that subtle marine transgressions occur at the top and base of the Eday Marl. The Eday Marl was formed within a sandy sabkha environment with the sediments showing a clear internal climatic cyclicity. The interval represents an aridity episode within a long sequence of fluvial sandstone. The contrast with the D-C boundary events is the association of high sea-levels with both humidity (Hangenberg) and aridity (Taghanic) episodes. Both are associated with Milankovitch driven climatic maxima but in the case of the Taghanic the high sea levels are believed to result largely from thermal expansion of sea water. The aridity driven reduction in the terrestrial hydrological cycle and linked changes in the shelf sea circulation and water temperature provide a mechanism for the very significant Taghanic extinctions that occur in both the marine and terrestrial realms.

STRATIGRAPHIC RECORDS OF MILANKOVICH CYCLES IN BRITISH JURASSIC

Strata: progress since the publication of House (1985).
Graham P. Weedon (University of Luton).

This talk will discuss how modern approaches to data collection and processing, specifically via time-series analysis, have revolutionised the way that sedimentary cycles are examined and exploited since the publication of House (1985, "A new approach to an absolute timescale from measurements of orbital cycles and sedimentary microrhythms", *Nature* 316, pp721-715). The background and importance of time-series analysis will be explained and examples of results will be illustrated for the Lias, Oxford Clay and Kimmeridge Clay.

ANNUAL DINNER

This year's annual dinner will be held on Saturday 6th December 2003 after the Annual General Meeting. It will be at King's Manor, York University. Places should be booked with Mavis May, Bethany Cottage, 3 Gordon Park, Beck Bank, Cottingham, East Yorkshire, HU16 4LF. Telephone: 01482 876768. Further details in November Circular.

MEETING OF THE EAST MIDLANDS REGIONAL GROUP OF THE GEOLOGICAL SOCIETY

The Christmas meeting lecture of the East Midlands Regional Group of the Geological Society will be given by Professor David Lerner from the University of Sheffield and will be entitled Urban Groundwater. The meeting will be held on Thursday 11th December 2003 (18.30 for 19.00 pm) in Meeting Room 1, British Geological Survey, Keyworth, NG12 5GG. Free refreshments will be available, please e-mail Judith.Nathanail@lqm.co.uk if you are going to attend, so catering can be allowed for.

BRITISH GEOLOGICAL GEODIVERSITY ACTION PLANS FOR THE NORTH PENNINE AONB

The British Geological Geodiversity has been commissioned to carry out Action Plans for the North Pennine AONB and require your input, comments and advice. The Society will be responding to these plans, but if you would like to respond personally, please do so to Brian Young at Liddisdale, Millfield Road, Riding Mill, Northumberland NE44 6DL. Telephone/Fax: 01434 682755. E-mail: by@bgs.ac.uk by the 30th November 2003.

NEW MEMBERSHIP SECRETARY

Christine Jennings-Poole - Chris graduated in Geology at Hull and has been a member of our Society for many years. She currently works in the health service and lives in Teeside. Chris will take over in February 2004.

CALL FOR PAPERS : NEW POSTGRADUATE RESEARCH

The Society's general meeting on 21st February next year, to be held at the University of Durham, is to be a forum for earth science postgraduate students to present the findings of their research. Talks on any subject are welcome and they do not have to represent the "finished article", the society is keen to hear of the latest developments in research being undertaken in the region. If you would like to give a talk then please contact the programme secretary.

FIELD MEETINGS OF CORRESPONDING SOCIETIES

Contact society representatives for the latest information.

CRAVEN & PENDLE GEOLOGICAL SOCIETY

Yvonne James. Tel: 01282 813772 or www.cpgs.org.uk

Tertiary deep sea faunas associated with cold seeps Friday 17th October
 Speaker: Fiona Gill B.Sc (Hons), University of Leeds.

Geology of La Palma, Canary Islands, Spain Friday 14th November
 Speaker: Hed Hickling, B.A., M.Sc.

CUMBERLAND GEOLOGICAL SOCIETY

Nigel Courtman. Tel: 01229 861478 or www.cumberland-geol-soc.org.uk

The Planets October 29th 2003
 Speaker: Stuart Atkinson (A Local Amateur Astronomer)
 The lecture Theatre, Tullie House Museum, Carlisle.

Early Mining in the Lake District November 12th 2003
 Speaker: David Bridges
 The lecture Theatre, Westlakes research Institute, Moor Row, Whitehaven.

EAST MIDLANDS GEOLOGICAL SOCIETY

Sue Miles e-mail sue.miles@freethcartwright.co.uk, or www.emgs.org.uk

HULL GEOLOGICAL SOCIETY

Mike Horne. Tel: 01482 346784 (after 7.30 pm) or e-mail: m.horne@hull.ac.uk
 or www.go.to/hullgeolsoc

LANCASHIRE GROUP OF THE GEOLOGISTS' ASSOCIATION

Norman Catlow. Tel: 01772 727577 or e-mail: ncat@cwcom.net

LEEDS GEOLOGICAL ASSOCIATION

Jeremy Freeman. Tel: 0113 268 5968 or www.leedsgeolassoc.freerve.co.uk

MANCHESTER GEOLOGICAL ASSOCIATION

Jane Michael. Tel: 0161 366 0595, e-mail: jammyjane@aol.com or
www.mangeolassoc.org.uk

NORTH EASTERN GEOLOGICAL SOCIETY

Frank Trowbridge. Tel: 01642 582786, e-mail: frank.trowbridge@care4free.net
or www.northeast-geolsoc.50megs.com

WESTMORLAND GEOLOGICAL SOCIETY

Mrs P. M. Wilson. Tel: 01539 533198 or www.wgso.fsnet.co.uk

SUBMISSION OF PAPERS

Manuscripts for publication in the Proceedings should be submitted to *'The Editors, Proceedings of the Yorkshire Geological Society, Geological Society Publishing House, Unit 7, Brassmill Lane Enterprise Centre, Brassmill Lane, BATH, BA1 3NJ.'* Typescripts should be prepared using the updated instructions for authors given on the inside back cover of the latest issue (Volume 54 Part 3, May 2003).

Publication of manuscripts may be expected in the next, or next but one part, following acceptance. As a result of the change in publishing arrangements the proceedings will be abstracted and/or indexed in, *GeoArchive, GeoRef, Geobase, Geological Abstracts and Mineralogical Abstracts, Research Alert and Science Citation Index Expanded (SCIE).*

COPY FOR CIRCULAR

Copy deadline for the field meetings Circular 512 is the 3rd October. The next indoor meeting will be held on the 15th November 2003 at University of Sheffield. Ancient Oceans and Atmospheres. Speakers: Professors Dick Aldridge and Dave Beerling.

General Secretary

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