

A Registered Charity
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Circular 520



YORKSHIRE GEOLOGICAL SOCIETY

President: Professor Pete Rawson

AGM AND PRESIDENTIAL ADDRESS

Paracyloceras bidentatum
(Koenen) from the
top B beds, Speeton



PRESIDENTIAL ADDRESS:
THE SPEETON CLAY IN ITS GLOBAL SETTING
PROFESSOR PETE RAWSON

15.30 to 18.00 SATURDAY 4th DECEMBER 2004

YORK ST. JOHN COLLEGE, LORD MAYOR'S WALK, YORK
Mince pies and tea/coffee available from 3.00pm

Paper Sponsored by

INDEPENDENT PAPER
WAKEFIELD

www.yorksgsolsoc.org.uk

NON MEMBERS WELCOME

YGS 2004

AGENDA FOR THE ANNUAL GENERAL MEETING FOR 2004

1. Minutes of the last General Meeting held at the Department of Geography, University of Hull, Hull on Saturday, 6th November 2004.
2. The Annual Report
 1 General Secretary 1 Treasurer's Report and Balance Sheet
3. Election to Membership
4. Election of Officers and other members for the 167th Session, 2005 Councils nominations are given below. Additional nominations, except for the Offices of President and Senior Vice President, should be received by the General Secretary no later than Thursday 2nd December 2004.

OFFICERS	PRESIDENT:	John Powell Ph.D.
	VICE PRESIDENTS:	Professor Pete Rawson Mike Allderidge MA.
	SECRETARY:	Trevor Morse Ph.D.
	TREASURER:	Will Watts BSc.
	WEB EDITOR:	Professor Patrick Boylan
	CIRCULAR EDITOR:	Keith Park BSc.
	PROGRAMME SECRETARY:	Camilla Nichol BSc.
	EDITORS:	Stewart Molyneux Ph.D. Doug Holliday Ph.D.
	MEMBERSHIP SECRETARY:	Christine Jennings-Poole BSc.

COUNCIL John Aram BSc., John Collinson Ph.D., David Evans Ph.D., Jonathan Ford Ph.D., Teresa Graham, John Knight Ph.D., Richard Oates, Stuart Ogilvy BSc., Peter Robinson BA., Paul Wignall Ph.D., Noel Worley Ph.D., John Gregory Ph.D.

5. Presentation of MOORE MEDAL to Mr Ian Kane BSc.
 The Moore Medal is awarded "annually to the student from the north eastern universities and colleges who is judged to have produced the best final year undergraduate project or dissertation".
6. Presentation of the JOHN PHILLIPS MEDAL to Professor John Catt.
 The John Phillips Medal is awarded by the Council of the Society not more frequently than biennially as "an acknowledgement of the distinguished contributions to or of work bearing upon the knowledge of the stratigraphy or palaeontology of the North of England".

The Society would like to thank Independent Paper, Wakefield for sponsoring the paper for this publication, therefore allowing it to be produced in colour at no extra cost to the YGS.

7. Presidential Address 2: THE SPEETON CLAY IN ITS GLOBAL SETTING
Professor Pete Rawson
8. Annual Dinner at Kings Manor
Guest Speaker: Professor John Catt.

THE SPEETON CLAY IN ITS GLOBAL SETTING

Professor Pete Rawson, University College London

Last year I reviewed the regional setting of the Lower Cretaceous Speeton Clay Formation, concluding by showing that although the ammonite faunas are predominantly of Boreal (northern) origin, the appearance of Tethyan (mid-latitude) or Tethyan-derived taxa at some levels indicates that the North Sea and contiguous North German basins maintained at least intermittent marine contact with more distant areas. In this second Presidential Address I will firstly look at the biogeographical relationships of the Speeton and North German faunas more closely, then focus on when the various immigrants came; where they may have come from and how they got here; and what controlled the migrations.

As noted last year, most immigrants arrived at times of sea-level highstand, and some reflect a rapid, almost global, expansion in the range of typical 'Mediterranean Province' Tethyan taxa. The main immigration intervals were in mid Valanginian, Early Hauterivian, mid Hauterivian and Late Barremian times. In between these intervals the immigrants either established successful descendant populations or quickly became extinct.

Where did they come from and how did they get here? For most of Early Cretaceous time the North Sea and contiguous North German basins were almost completely surrounded by land. But northward there was a narrow seaway between Norway and East Greenland that linked the northern part of the North Sea Basin with the Boreal seas covering much of the present day Arctic area. That seaway allowed typical boreal ammonites such as *Polyptychites* and *Simbirskites* to migrate

southward to occupy our area. A second seaway extended south-eastward from the North German Basin through the Polish Furrow and Carpathians to provide a direct link with the West Mediterranean area and its characteristic 'Mediterranean Province' faunas. This seems to be the obvious route by which Tethyan immigrants (e.g. *Olcostephanus* and *Crioceratites*) reached Speeton. However, the appearance of some other Tethyan-derived taxa is more difficult to explain. Two genera (*Aconeceras* and *Heteroceras*) appeared when the Polish Furrow was apparently closed, while at least two 'Tethyan' ammonites well-known from Speeton, *Parastieria* and *Protacconeceras*, have strong South American connections - *Parastieria* is otherwise known mainly from Peru, while *Protacconeceras* is common in the southernmost part of Argentina. These and other records indicate that although sea-floor spreading had yet to start to the west of Britain, a North Atlantic seaway must have existed, bringing 'Tethyan' taxa northwards to East Greenland and round the northern tip of the Scottish landmass into the North Sea basinal system.

What controlled the migrations? As the marine connections generally remained open between sea-level highstands, that could not have been the only controlling factor on migration. Changes in climate/water temperatures are a popular explanation, a southward expansion of Boreal taxa being linked with cooler climatic intervals and northward movement of Tethyan taxa with warmer periods. The most tantalising question is whether intermittent icecaps occurred to form a causal link between changes in both sea level and climate.

A WORD FROM THE PRESIDENT

When Council adopted its Forward Plan in June the first thing it did was to follow the recommendation to improve our committee structure so that we can respond to the changing needs and roles of our Society. As a result we have formed four committees, Membership, Science (which includes the Editorial Board and a Programme Subcommittee), External Affairs and Finance. In the shorter term we also have several working groups charge with specific tasks, and these include Circular and Web Working Groups which report direct to Council. Two of the committees are scheduled to hold their initial meetings at Hull in November, immediately before the Council and Public meetings there.

This is being written before the Hull meeting as by then I will be in the field in Argentina, returning just in time for our AGM in York. It is also my last 'word' before retiring as President at the AGM. The last two years have been both challenging and enjoyable. We have seen a lot of change, not least among our Society officers, with new Membership and Programme secretaries and new Circular and Web editors coming in and a new Treasurer about to start. It is good to receive such strong support from our membership and we hope that more of you will become involved during the coming years, whether it is by joining Council or one of its committees, commenting on the proposals for future development outlined in our Forward Plan (see Circular 518 and our website), or contributing to our circulars and website - for which we would welcome your news, queries and suggestions for further improvement. It would also be good to receive ideas for themes for future meetings and possible venues for field excursions.

It is a particular pleasure to hand over the presidency to Dr John Powell and to know that our Society will be moving forward in such capable hands and with such a strong supporting team.

Pete Rawson

SUBSCRIPTION RENEWALS DUE JANUARY 1st 2005

Subscriptions are due on January 1st and remain as last year i.e:

ORDINARY	£30.00	ASSOCIATES	£10.00
OVER 65	£20.00	STUDENTS	£12.00

If our current records show that we expect you to renew by cheque, then CH will appear on the top line of the address label of this Circular. Please send a cheque for the relevant amount (made payable to YGS) to Mrs Chris Jennings-Poole, 6 Wolsey Drive, Stockton on Tees, TS20 1SY.

If you pay by direct debit you need take no further action. If you pay by standing order PLEASE check with your bank that it is for the correct amount.

ANNUAL DINNER

The annual dinner will be held on Saturday 4th December 2004 at 6.00 pm for 6.30 pm after the AGM. As usual, it will be at the King's Manor, York . The cost of the tickets will be £18.00 and should be booked with, and cheques made payable to, Dr Trevor Morse; for address & telephone number, see back of Circular. Please tell Trevor at the time of booking if you wish to have a vegetarian meal or have other dietary needs. Dress is smart informal and guests are welcome to the dinner. The closing date for booking is 19th November 2004, however Kings Manor will allow late bookings up to 26th November 2004.

MENU

Ballantine of Salmon and Herbs with a Dill and Tomato Dressing

Dartoise of Chicken with Mushrooms with a Selection of Fresh Seasonal Vegetables

Tiramisu with Caramelised Banana

Fresh Filtered Coffee with Continental Chocolates

SUMMARY OF ACCOUNTS 2003 - 2004

The following is a brief summary of the audited accounts for the year ended 31st August 2004 which will be presented in full to the AGM in December.

INCOME £

Subscriptions / Gift Aid	25030
Sale of Publications	2253
Interest / Dividends	1715
Donations	1141

30139

EXPENDITURE £

Proceedings	17465
Circulars.....	3765
Data Base	1200
Meetings	1758
Publish Field Guides	3528
Miscellaneous.....	1093

28809

Cash Surplus	1330
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30139

ASSETS £

Bank	3442
COIF Deposit	21110
Nat. Savings Bank Deposit	11447

Total Cash.....35999

Investments at Valuation	14380
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Total Assets.....50379

CASH ALLOCATION 2004 - 2005 £

For Proceedings	21440
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General Reserve	14559
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Total Cash.....35999

M.G. Allderidge, Treasurer

Please note, reviews of books and publications reflect the view of the individual reviewer and in no way necessarily reflect the view of Council or the Society as a whole.

TEACHING EARTH SCIENCES Journal of the Earth Science teachers' association
Vol 29 number 1 2004 ISSN 0957-8005 www.esta-uk.org Editor Cally Oldershaw

Earth Science has an unhappy relationship within the school curriculum, often falling between the stools of Geography and Science with no-one quite sure to which it belongs. In my experience of schoolteaching, if Geology is taught by a geographer, even one whose interests lie with physical geography, the subject takes on a geographical flavour, with a lack of appreciation of the chemistry, physics and geometry involved. If geology is taught by a science teacher, the latter aspects may well be taught well, but the context of the rocks is missing or weak. Geology specialists are rare in the school classroom and more often than not teach science anyway. Some may teach geography, but few are lucky enough to teach geology in school as a stand-alone subject. Traditionally this has meant that university geology departments assume their new undergraduates know nothing or have been badly taught.

In the National Curriculum and frameworks for school subjects, earth science, (the little that there is), falls within the remit of the Science department and not the geography department. This is all very well, but science teachers, unversed in the nuances of geology struggle to make the subject come alive, seem relevant or contextual. Chemists see geology, it seems, simply as the raw materials from which their subject has emerged!!

Teaching Earth Sciences is the journal of the earth science teachers' association which exists as a support group for any one involved in the delivery of the subject, primarily in the school classroom, but arguably for those in Higher Education too. Its aims are high and very important and should be supported, perhaps by organisations like ours who may benefit from working with such a group, especially if the YGS is serious about attracting a younger age cohort as part of its development plan.

Teaching Earth Science journal adopts the usual format for support organisations; a mixture of news, reviews, comment, help, (including weblinks,) articles about field work (in this issue it is a superbly planned and presented course in Tenerife) and research articles about child learning and personal interests, (makes for discouraging reading in this issue!). Additionally there are articles about the curriculum ("What is the future for KS4 Science?"), a scheme of work lesson plan on sun, moon earth and shadows for Primary teachers.

As a former teacher who has taught geology, geography and science what did I make of it? Well, the journal is good and is a useful resource, but I would certainly like to see more lesson delivery ideas, schemes of work and sharing of ideas that worked in the classroom. Having said that, I have only seen this one issue, it may well be that such material is spread over the remaining issues during the year. However, it would seem to me to be important to have such material available for the non-geologist teacher of earth science who may do the subject a disservice by unimaginative teaching.

Field work is crucial to earth science teaching. Of all the teaching I did, it was fieldwork which brought the subject alive, and yet ask any teaching union about taking pupils out of school and they will warn about the risks in doing so. Recrimination and the compensation culture have made it very difficult to conduct field teaching in any subject, so a journal like Teaching Earth Science could do well if it tried to help teachers overcome these restrictions.

Finally, wouldn't it be wonderful if both our Proceedings/Newsletter and Teaching Earth Sciences were to adopt a mutual policy of commenting on each other's activities? There must be a huge reserve of geological knowledge and experience amongst our membership who might just be able to offer practical help for the hard-pressed teachers of earth science in our schools, either directly as consultants or indirectly through the worthy efforts of the Earth Science Teachers' Association.

STEPHEN MOTT, M.Sc., B.Sc.

Oct 2004

CALENDARS

Remember to get your order in quickly for the limited addition YGS calendar. The order form is included with this circular, they make excellent seasonal gifts for friends and family. The calendars are in full colour, A3 size, with one month to view. Each month has an individual colour photograph of a geological nature taken by YGS members. Don't miss out, they are a bargain at £5.00 plus £2.50 p+p.

CIRCULARS

If you have failed to receive or know of someone who has failed to receive a copy of the printed circular could you please let our membership secretary know. Chris' contact details can be found on the reverse of the circular. We are always trying to improve the service to members and this information will help us.

On the subject of circulars, there has been some confusion on registering for the e-mail circular. If you register for the electronic version you will still receive a printed version, the electronic version only covers the summer period when there is no printed circular produced. So everyone with e-mail facilities is quite safe to register, you will not miss out on the printed Circular. To register, send the Circular Editor an e-mail with the subject YGS and a request to receive the electronic version of the circular, we need this to conform with current legislation on unsolicited e-mails.

YORKSHIRE GEOLOGY MONTH - MAY 2005

The simple aim of this 'Yorkshire Geology Month' is to ask geologists, geology groups and people with interests related to geology to run one or more local geological events for the public in Yorkshire and the surrounding areas in May (or early June) 2005. If you or your organisation/company are interested in taking part please contact Mike Horne initially or visit www.horne28.freeserve.co.uk/ygm.htm for further details. It is also hoped that as a result of the month's activities an informal network of Yorkshire geologists will be created and those taking part will be invited to a 'gathering' during July 2005.

e-mail - m.j.horne@hull.ac.uk or write to 28 Salisbury Street, Hull, HU5 3HA.

FORTHCOMING YGS MEETINGS: 167th SESSION

Leeds, Saturday 22nd January 2005	England's north-west: new views on old rocks
Sheffield, Saturday 19th February 2005	Joint meeting with the Sorby Society, Red-bed sediments
BGS Keyworth, Saturday 19th March 2005	Joint meeting with the East Midlands Geological Society. Recent BGS Research

CORRESPONDING SOCIETIES

Contact society representatives for the latest information.

CRAVEN & PENDLE GEOLOGICAL SOCIETY

Yvonne James. Tel: 01282 813 772 or www.cpgs.org.uk

Anatomy of a Crisis: the Montserrat Volcanic Emergency 1995-99

Friday, 10th December

Speaker: Peter Kokelaar Ph.D., University of Liverpool

Jurassic Geology of Tibet

Friday, 14th January

Speaker: Paul Wignall Ph.D., University of Leeds

CUMBERLAND GEOLOGICAL SOCIETY

Nigel Courtman. Tel: 01229 861 478 or www.cumberland-geol-soc.org.uk

Members Evening - Short presentations by members of the Society

10th December

The Friends Meeting House, Keswick

Cumbria Rigs Sites, An Interactive Evening

19th January

Speaker: Dr. Gordon Taylor (Chairman, Cumbria Rigs)

Newton Rigg Campus, Penrith

EAST MIDLANDS GEOLOGICAL SOCIETY

John Wolf e-mail: sec@cmgs.org.uk or www.emgs.org.uk

Extension Tectonics in the Afar Triangle

Saturday, 11th December

Speaker: Dr Tony Waltham (Nottingham Trent University)

Start: 6.00pm.

Ice Age Art at Creswell Crags - Its Relevance and Context

Saturday, 8th January

Speaker: Ian Wall (Creswell Heritage Trust)

Start: 6.30pm.

EAST MIDLANDS REGIONAL GROUP OF THE GEOLOGICAL SOCIETY

Ed Hough e-mail: eh@bgs.ac.uk

Geoconservation - RIGS and LGAPs explained.

Tuesday, 7th December

Speaker: Dr Cynthia Burek.

Please confirm if you are attending as numbers are required for refreshments.

HUDDERSFIELD GEOLOGY GROUP

Julie Earnshaw (Secretary). Telephone: 01484 311 662 or e-mail: earniehome@ntlworld.com

Close Encounters of the Geophysical Kind -

Monday, 6th December

Applications of geophysics to geology, mining and archaeology

Speaker: Rob Vernon. Greenhead College, Room F8. Start: 7.15pm.

AGM and meal at the Croppers Arms, Marsh

Monday 10th January

Greenhead College, Room F8. Start: 7.15pm.

HULL GEOLOGICAL SOCIETY

Mike Horne. Tel: 01482 346 784 (after 7.30 pm)

or e-mail: m.j.horne@hull.ac.uk or www.go.to/hullgeolsoc

Annual General Meeting of the East Yorkshire RIGS Group

Monday, 6th December

Start: 7.00pm, venue to be confirmed.

Confessions of a Chalkoholic

Thursday, 9th December

Speaker: Paul Hildreth

LANCASHIRE GROUP OF THE GEOLOGISTS' ASSOCIATION

Norman Catlow. Tel: 01772 727 577 or e-mail: norman@catlow4736.freeseve.co.uk

LEEDS GEOLOGICAL ASSOCIATION - 130th ANNIVERSARY PROGRAMME 2004

Anthea Brigstocke (General Secretary). Tel: 01904 626 013.

E-mail: abrigstocke@hotmail.com or www.leedsgeolassoc.freeseve.co.uk

AGM and Conversazione - short talks and displays by members

Thursday 9th December

LEICESTER LITERARY & PHILOSOPHICAL SOCIETY

Chairman: Andrew Swift. Tel: 0116 252 3646 or e-mail: as48@le.ac.uk

Carboniferous Coal Swamp Extinction:

Wednesday, 1st December

An Alternative Hypothesis from China

Speaker: Dr Jason Hilton (School of Geography,

Earth and Environmental Sciences, University of Birmingham)

Christmas Meeting held at the New Walk Museum, Leicester

Wednesday, 15th December

MANCHESTER GEOLOGICAL ASSOCIATION

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

Mineral Deposits and Environmental Mineralogy

Wednesday 8th December

Speaker: Dr Linda Campbell, University of Salford

Afternoon Seminar - Evolution of the Cheshire Basin

Saturday, 22nd January

Sherwood Sandstones - Dr. Geoff Warrington, formerly British Geological Survey

Mercia Mudstones - Dr. Albert Wilson, formerly British Geological Survey

NORTH EASTERN GEOLOGICAL SOCIETY

Frank Trowbridge. Tel: 01642 582 786, e-mail: frank.trowbridge@care4free.net

or www.northeast-geolsoc.50megs.com

Members' Night Topics: Mount Etna and Taupo Volacnic Zone

10th December

Mount Etna - Tectonic Background and Recent History

Speaker: Mike Simmons

Geology of the Taupo Volacnic Zone, New Zeland

Speaker: Gordon Wilkinson

NORTH EAST YORKSHIRE GEOLOGY TRUST

Mike Windle. Tel: 01947 881000, e-mail: contact@neyorksgeologytrust.com

Guided Walk

Sunday 28th November

Meet: Roseberry Topping, Newton-u-Roseberry Car Park. Start 11.00am.

Lecture

Thursday 25th November

Scarborough Library Concert Room. Start 7.30pm.

SORBY NATURAL HISTORY SOCIETY

Ken J Dorning.

www.shu.ac.uk/city/community/sorby/secgeo.shtml

WESTMORLAND GEOLOGICAL SOCIETY

Mrs P. M. Wilson. Tel: 01539 533 198 or www.wgso.fsnet.co.uk

Members' Evening and Jacob's Join

An opportunity for members to share current projects, display samples, air their queries or give a short presentation

Wednesday, 15th December

Cretaceous Lagerstätten including feathered dinosaurs from China and fossil fish from Brazil

Speaker: Dr. John Nudds, Manchester Museum

Wednesday, 19th January

YORKSHIRE REGIONAL GROUP OF THE GEOLOGICAL SOCIETY

Isla Smail. Tel: 0113 242 8498, e-mail: isla.smail@arup.com

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 3JN'*. Typescripts should be prepared using the updated instructions for authors given on the inside back cover of the latest issue (Volume 55 Part 2, November 2004).

Publication of manuscripts may be expected in the next, or next but one part, following acceptance. 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 Circular 521 is the 4th December. The next indoor meeting will be held on the 22nd January 2005 at the University of Leeds. Title: England's north-west: new views on old rocks.

Copy deadline for Circular 522 is the 19th January 2005..

GENERAL SECRETARY

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