

---

# CAM QUA

The newsletter of the  
GODWIN INSTITUTE FOR QUATERNARY RESEARCH

---

ISSUE 31

EASTER TERM 2005

## Quaternary - 246 years young, still going strong!

“Funny things - boundaries; they have preoccupied stratigraphers since the subject began and still take a disproportionate amount of workers’ attention”. This thought, from the introduction to my review of the book *‘The Pleistocene boundary and the beginning of the Quaternary’* edited by John van Couvering (*Geological Magazine* 1997), was my innocent reaction to the controversy generated following the positioning of the Plio-Pleistocene boundary at the Vrica GSSP in 1984 (Aguirre & Pasini 1985). The definition of stratigraphical units demands that we, as geoscientists, are forced to devote a vast amount of time considering where to place their limits. When I wrote that review I had no idea how prophetic the statement would be, particularly in relation to my own time and that of the Quaternary community in general.

So here we are in 2005 in the midst of a controversy, not of our making, yet one which we are forced to address by the International Commission on Stratigraphy’s (ICS) insistence that the title of our period (system), although in use for

almost 250 years, is not formally defined. Accordingly, its use is deemed invalid, a fate that has curiously not befallen other systems, however.

### **‘Task force’**

At the 31<sup>st</sup> International Geological Congress at Florence in August 2004, it was agreed to establish a joint INQUA-ICS working group “with the single task of defining the Quaternary.” After 3 months the membership of the working group, or ‘task force’ as the ICS prefer to call it, was agreed upon and consists of 9 members. They are: *Chair*: James Gehling, Australia, *Vice-Chair*: Brad Pillans, Australia *Secretary*: James Ogg, USA; *Members*: Nicholas Shackleton, Jan Piotrowski, Leszek Marks, John van Couvering, Phil Gibbard and Frits Hilgen.

The working group will report to the ICS meeting to be held in Leuven (Belgium), in September 2005. Yet at the time of writing, no working group meeting nor e-mail discussion forum, has been established. This led to a subgroup of the Quaternary representatives meeting for an

informal discussion in Cambridge on 24 March 2005 to formulate a policy that would be acceptable to the majority of Quaternary workers.

### **Working group conclusions**

- Quaternary should be retained as a formal chronostratigraphical unit. Because: it is of customary, worldwide usage (almost 250 years) both within and equally importantly beyond the Quaternary community, stability of nomenclature, the Quaternary is a unique part of the geological system being characterised by major climatic and environmental oscillations that are expressed worldwide, including glaciation of the mid-latitudes. The Quaternary has long been used as a formal chronostratigraphical unit, a concept that was implicit in the formalisation of the basal Pleistocene boundary from the first discussions in 1948 (the so-called N-Q boundary). Moreover, our knowledge of this period is considerably greater than any other.

- The term Quaternary should be formally defined so that it will be of real practical benefit to

*Quaternarists* is a fundamental requirement of INQUA and has the full support of over 95% of Quaternary practitioners (who number thousands). It is of especial significance for terrestrial workers, particularly geological surveyors, who require to identify horizons that can be mapped for cartographic purposes and who represent a substantial proportion of the large population of *Quaternarists* worldwide. It should include both the Pleistocene and Holocene series, i.e. it includes the present day.

- The Quaternary should be a full system/period. This is fully consistent with its history of usage and with the characteristic uniqueness of the period, including the abundance of its sediments around the world, as distinct from those earlier in the Cenozoic.

- Its base should be at 2.6 Ma. Logically the basal boundary of the Quaternary should coincide with that of the Gelasian Stage (Pliocene), where a GSSP already exists at 2.6 Ma and can be applied with little additional complication. This point is the most ideal solution because it marks a phase of major transition of global climate, biota, environments and, coincides with the Gauss/Matuyama boundary. For correlation purposes, it is the best possible option for a system/period-status boundary. Although this would require the hitherto unthinkable separation of the basal Quaternary boundary from that of the Pleistocene, it is seen as the best compromise that is likely to succeed in the present situation.

### **GTS 2004**

In the meantime, you may have noticed that the long-awaited '*Geologic Time Scale 2004*' book was finally published. This book, which was edited by ICS chairman F. Gradstein, ICS Secretary J. Ogg & Alan Smith, is not an official publication of the ICS but since two of the three editors are ICS officers and the majority of contributors are members of the ICS Sub-commissions etc., there can be little doubt that this authoritative volume will become the quasi-'official' reference for everyone wishing to apply and understand the latest version of the geological time scale. This is all well and good, and there is absolutely no doubt that the successful compilation of this volume must overall be seen as a great success. It replaces a similar previous volume (Harland, W.B. *et al.*, 1989, known as GTS 3), which was considerably

slimmer. Comparison of the two books shows how much geological and especially chronostratographically-related geological research has progressed in that intervening period.

Quaternary readers of GTS 2004 might legitimately ask, where is our period? As one of the contributors, I am in a difficult and compromised position. If you consult the article by Thijs van Kolfschoten and myself on the 'Pleistocene and Holocene Series' (p.441-452) you will see discussion of terminology, subdivision and correlation of sequences. This contribution is the second version of our original article, which we submitted under the title 'Quaternary System', in keeping with agreement reached when the Subcommission on Quaternary Stratigraphy (SQS) was re-established within the ICS after the difficulties in 2002. A condition of the re-establishment of the SQS was that Quaternary would be fully reinstated to its pre-2002 status. Our article was considerably précised and reduced to 4 pages in the first version of the GTS 2004 that I saw by chance at a meeting in Cambridge in February 2004. Whilst editors are perfectly within their rights to modify authors contributions, of course, it is normal to show the changes to the authors in order to ensure the accuracy of the changes.

Immediately following discussions with my colleague Dr Alan Smith, the third editor of the GTS 2004, our text was substantially reinstated, and we are grateful for his intervention. However, a correlation table (Fig. 22.1) which was redrawn from our original submitted with the article, apparently escaped reinstatement. As published, this table omits the word Quaternary as a period (system) and instead the Neogene is extended to the present-day, the situation favoured by the ICS. Thijs van Kolfschoten and I were disappointed when we saw this table for the first time in the published volume and wish to state unequivocally that this does not reflect our opinions. At no time were we shown proofs of our article and therefore we are not responsible for the content, especially the table. We can only apologise to the community for the manipulation of our writings, which is unfortunately the latest example of the tactless way in which the ICS has approached the 'Quaternary issue' over the past 3 years.

We hope that the future holds a period of more positive interaction of the ICS with the Quaternary community.

*Phil Gibbard*

## “FRIGHTENING” QDG

Few months ago, just after a formal discussion about the future of the Godwin Institute, I realised that we had unfortunately not discussed any Quaternary Discussion Group (QDG) related issues at the meeting. I raised my concern about the current QDG mode of operation by e-mail. Indeed, I believed that QDG could be made a more efficient “engine” for the benefit of the Quaternary Community in Cambridge, if some changes were being made. Unfortunately, this has had no effect!

All of us, even those who do not attend QDG regularly, should have their say. In particular, we need to know what changes (more informal discussions, regular round tables, other time and/or place, frequency, student seminars, shorter talks, other topics...) are necessary to make more people feeling part of a group that intends to meet regularly at a meeting called Quaternary “Discussion” Group, as part of its continuation and also proof of existence. After a long and silent observation, I believe that QDG needs a gentle but good “dusting”. I dare to hope that some other people amongst you, the readers of CAMQUA, share this view.

At a time when the Quaternary community needs to be strengthened, I can only see that its current mode of operation with a Friday evening QDG, where (let’s face it) nobody comes, will only contribute to weaken the community even further. While Nick’s retirement was said to make the Godwin community “dizzy” and even weaken it (unless this is a personal understanding of the situation), I consider this a poor and bad excuse altogether failing to mask a lasting lack of “bring and share together” ideas and

discussions, future projects, papers, etc. on a regular basis. It is rather sad because a deserted QDG cannot and surely will not fill such emptiness. One example: in more than 7 years in Cambridge, I have never seen a round table being organised where each of us could tell others what he/she has to do in the Quaternary Cambridge Community! Could we start there or is that too simple? Don’t assume we know each other’s research interests very well since this cannot be the case, considering the rare and low level of exchange between us.

We can change this. Let’s move from being a rather old-fashioned, almost secret society community to an attractive dynamic and open-minded group of people.

Who are we? What do we want to do together now? And what comes next? We need to answer these questions with some degree of certainty and rather sooner than later. Perhaps, we could agree on one or two sessions of QDG that should be devoted not to hear talks (although usually interesting) but discuss and/or even debate all these points.

Frightening QDG really! Sent your opinions and ideas, circulate them via e-mail amongst us and discuss in the next CAMQUA, but don’t be shy!

*Dr Maryline Vautravers, Godwin Laboratory  
mv217@cus.cam.ac.uk*

————  
*Please send reactions to either Dr Maryline Vautravers or to the Camqua editor.*

## Forscherstreit um das Quartär

Eine internationale Kommission hat das **jüngste Zeitalter der Erdgeschichte** kurzerhand abgeschafft – der Widerstand ist gross

You will have to admit, this would be a great title for the German edition of CAMQUA: a few words describe the current controversy surrounding the term 'Quaternary'. But CAMQUA will need to rethink its international plans. Under this title, journalist Axel Boianowski published a full page article on the present position of the Quaternary and the ongoing debate amongst the scientists in 'Der Bund', the second largest newspaper in Switzerland. With rumours going that also German weekly magazine 'Die Zeit' is planning to publish a similar article, the need for CAMQUA in German has diminished considerably. But we are great in our defeat, and provide you with translation of the title and the article's introduction from 'Der Bund'.

*Source: Der Bund, 22 April 2005*

### **Scientists quarrel about the Quaternary**

*An international commission abolished the most recent period of Earth's history without further ado – the opposition is enormous*

*Geologists are particularly fond of the Quaternary: deposits from this period comprising the last 1.8 million years are groundwater reservoirs and are used as a foundation soil. But because the Quaternary hasn't lasted for longer than the blink of an eye compared to Earth's entire history, it is going to be erased. For outsiders it may seem as a bureaucratic farce. For many geologists, however, it equals a putsch: in one fair swoop, a period is being wiped from the timescale of the history of the Earth. The Quaternary, the period which spans the last 1.8m years of Earth's history, was simply erased by the International Commission for Stratigraphy (ICS). The Neogene, which ranges back 23m years, was instead extended to the present.*

**The following QRA field guide is now available:**

**Langford, H. E. and Briant, R. M. 2004.** *Nene Valley Field Guide*. Quaternary Research Association, Cambridge.

**CONTENTS**

Introduction—H. E. Langford

**Theme chapters**

1. Late Tertiary to Middle Pleistocene drainage evolution of the eastern English Midlands—R. K. Belshaw, G. D. Hackney and K. A. Smith
2. Comments on the Anglian glaciation of the Fen Basin—H. E. Langford
3. Post-Anglian Pleistocene deposits of the Peterborough area and the Pleistocene history of the Fen Basin—H. E. Langford and R.M. Briant
4. Post-Anglian drainage reorganisation affecting the Nene and Welland—H. E. Langford
5. The geoarchaeology of the middle Nene valley—A. G. Brown
6. The Neolithic period in the valley of the Nene—J. J. Wymer

**Site reports**

7. The Holocene deposits of Holme Fen and Whittlesey Mere: a reappraisal—M. P. Waller
8. Funtham's Lane East—H. E. Langford, M. D. Bateman, S. Boreham, G. R. Coope, W. Fletcher, C. P. Green, D. H. Keen, T. Mighall, C. Rolfe and D. C. Schreve
9. Channels C and D at Bradley Fen — H. E. Langford, S. Boreham, J. Merry, C. Rolfe and D. C. Schreve
10. Eye Quarry—R. M. Briant, G. R. Coope, M. D. Bateman, R. C. Preece and H. I. Griffiths
11. Podehole—R. M. Briant, G. R. Coope and M. D. Bateman
12. Northam Pit—H. E. Langford

**Descriptions of relevant sites not visited**

13. Southorpe—R. Scaife
14. Elton—H. E. Langford
15. Sutton Cross—H. E. Langford, D. H. Keen and H. I. Griffiths
16. King's Dyke—H. E. Langford, M. D. Bateman, S. Boreham, K.-L. Knudsen, J. Merry and D. Penney

**NEWS: emiritus CAMQUA editor wins Peter Fleming Award**

**Philip Hughes** (ex-QPG, now at Manchester University) has been awarded with the Peter Fleming Award (worth £9,000) from the Royal Geographical Society.

The Peter Fleming Award is one of the senior awards of the Royal Geographical Society in support of the development of geographical knowledge and understanding.

# **Centre for Micromorphology University of London at Queen Mary**

## **Opening symposium**

Wednesday 18 May 2005

<http://www.geog.qmul.ac.uk/micromorphology/opening.html>

## **Fifth International workshop on glacial micromorphology**

23 to 27 May

*Conveners:* Jaap J.M. van der Meer, Jim Rose, John Menzies

This workshop will emphasize the making, description and interpretation of thin sections of glacial deposits. Lectures will only be a minor part of the programme.

The purpose of the workshop is to introduce young researchers and PhD students to micromorphological techniques as applicable to glacial deposits. The aim is that after the workshop participants are able to decide whether this technique is applicable to their own research and that they are able to use it with the aid of existing material.

The workshop will not only consist of microscopic work but also spend time in the field to discuss sampling procedures and strategies, as well as spend time on the technicalities of making thin sections. Demonstration material consists of the thin section collections of the conveners, which comprises over a thousand thin sections (max. size 8x15 cm) from a great variety of sedimentary environments and geographical locations. Description and interpretation of samples will be done independently by the participants, after which comparison with descriptions by the conveners will be made, followed by discussion.

**Detailed programme:** <http://www.geog.qmul.ac.uk/postgraduate/workshop/>

## **QRA 4th International Postgraduate Symposium**

*31st August - 2nd September 2005*

**Venue:** School of Geography, University of Plymouth, UK

**Organisers:** Katie Szkornik, Becky Turner

**Contact:** [QRA2005@plymouth.ac.uk](mailto:QRA2005@plymouth.ac.uk)

All postgraduates working within the Quaternary Sciences are invited to attend the QRA 2005 Postgraduate Symposium to be held at the School of Geography, University of Plymouth, UK. The meeting will provide an opportunity for all postgraduates, both masters and PhD students, to present their research in a relaxed and informal atmosphere. There will be an opportunity to experience the South West first hand through a stimulating field day and full programme of social events.

**More information on**  
<http://www.geog.plym.ac.uk/QRA2005/>



# British Antarctic Survey



## GEOSCIENCE SEMINARS

**Venue:** All seminars to be held in the **Conference Room** (except where indicated), at the British Antarctic Survey, Madingley Road, Cambridge

**Thurs 12th May, 4.15pm**

*Landscape Evolution in NW Iceland*

Dr Steve Roberts, BAS

**Thurs 19th May, 4.15pm**

*'Ground-truthing' the hydrological system in a 'hot-house' world*

Dr Paul Markwick, University of Leeds

**Fri 27th May, time tbc**

Venue: Room 187, British Antarctic Survey

*Title to be confirmed (Geochemistry)*

Professor John Stone, University of Washington

**Thurs 9th June, 4.15pm**

*Late Cenozoic Tephrochronological Studies in Eastern Beringia: Methods and Results*

Professor John Westgate, University of Toronto

**Thurs 16th June, 4.15pm**

*Meteorites: travellers in time and space*

Dr Monica Grady, Open University

**Thurs 23rd June, 4.15pm**

*The Neoproterozoic Glacial World: Defrosting some of the myths*

Dr Conall Mac Niocaill, University of Oxford

**Thurs 30th June, 4.15pm**

*Gas Hydrates: An essential component in understanding climate change in the Cenozoic*

Dr Mark Maslin, University College London

Refreshments and snacks are available after the talk (for a nominal fee).

After talk dinner at the Castle Inn, Castle Hill, ~6.30 p.m.

**All welcome!**

# ***Diary Dates, Easter Term 2005***

## **May**

**SPRI Wednesday, May 4, 4.30pm.** "*Oceanography on polar continental shelves and the influence of ice melt*" Dr. Karen Heywood (University of East Anglia)

**SPRI Wednesday, May 11, 4.30pm.** "*Moving on from Vostok: a new generation of deep ice cores*" Dr. Rob Mulvaney (British Antarctic Survey)

**QDG Friday, May 20, 8.30pm.** "*Microstructures and Micromorphological Investigations of Glacigenic Sediments*" Prof. John Menzies (Brock University, Canada)

**SPRI Wednesday, May 25, 4.30pm.** "*Snow processes in complex landscapes*" Dr. Richard Essery (University of Wales, Aberystwyth)

## **June**

**QDG Friday, June 3, 8.30pm.** "*Extent and Chronology of Late Cenozoic Glaciations*" Dr. Philip L. Gibbard (University of Cambridge)

**ARCH Friday, June 10, 1.15pm.** "*Forms of agriculture in the Korean Bronze Age*" Dr. Heejin Lee (Dept. of Archeology)

**QDG Friday, June 10, 8.30pm.** "*Hydrographic Development of the Baltic Sea during the Last Interglacial*" Dr. Martin J. Head (University of Cambridge)

**QDG** talks to be held in West Court, Clare Hall, Hershel Road.  
Full program: <http://www.giqr.group.cam.ac.uk/events/qdg/>  
Enquiries contact: M. J. Head, (3)39751, ([martin.head@geog.cam.ac.uk](mailto:martin.head@geog.cam.ac.uk))

**SPRI** seminars to be held in the Scott Polar Research Institute Lecture theatre. Full program: <http://www.spri.cam.ac.uk/research/seminars/physical/>  
Enquiries contact: Jeff Evans, (3)36570, ([jeffrey.evans@spri.cam.ac.uk](mailto:jeffrey.evans@spri.cam.ac.uk))

**ARCH** Talks of the George Pitt-Rivers bioarchaeology laboratory are held in the McDonald Institute lecture room (ground floor). Full program: <http://www.arch.cam.ac.uk/pittrivers/GPRtalks.html>  
Enquiries contact: Rachel Ballantyne, (3)33537, ([rmb51@hermes.cam.ac.uk](mailto:rmb51@hermes.cam.ac.uk))

**Deadlines:** Contributions for the next issue of CAMQUA should be submitted before the start of next term.

**Retiring editor: Stijn De Schepper ([smad2@cam.ac.uk](mailto:smad2@cam.ac.uk))**

Department of Geography, University of Cambridge