



Editor: Stephen McCarron

1. Introduction

Dear All,
Welcome to newsletter No. 43.

We encourage everyone to use our Listserver facility to broadcast occasional notices by e-mail to the membership during the year. We are in the process of archiving all IQUA Newsletters as pdf documents and making them available via the Website.

We look forward to seeing as many members as possible at the forthcoming Symposium on Quaternary Genetics on 27th Nov. We are making every effort to bring together an exciting and informative group of speakers and would encourage everyone to attend and publicise the meeting to potentially interested colleagues in the molecular Biology world particularly.

Stephen McCarron, NUIM, August. 2009

2. IQUA Committee, 2009/10

The IQUA Committee, following the 2009 AGM is as follows:

President: Prof. Pete Coxon, TCD (continuing)

Secretary: Dr. Stephen McCarron, NUIM (continuing)

Treasurer: Mr Francis Ludlow TCD (elected)

Postgrad rep: Gayle Mc Glynn, TCD (continuing)

Website manager: Dr Robin Edwards, TCD. (continuing)

Publications Secretary: Dr. Stephen McCarron, NUIM (continuing)

Ordinary members: Donal Mullane (continuing), Dr Graeme Swindles (U. of Bradford) (continuing), Dr Bettini Steffani (elected).

3. IQUA Spring Meeting and AGM 2009

The 2009 Spring Meeting and AGM took place on Sat. 28th March in Museum 4, TCD. Abstracts of talks presented at the meeting are listed under

Newsletter item 6. the meeting was very well attended, with over 40 attendees at some points. The Postgraduate Prize was awarded with congratulations to Ms Gayle McGlynn, TCD. The committee thanks are also extended to Gayle, Frank, their friends and colleagues in TCD for such a great effort in hosting a very successful and warmly appreciated meeting.

The AGM followed the Spring Meeting and was attended by ~15 members. Any changes to the Committee are listed above. It was decided at the meeting to establish a Postgraduate Radiocarbon Award of up to €350 initially towards the cost of obtaining a Radiocarbon date. The award will be given on foot of a short competitive selection process to a postgraduate IQUA member. A selection committee will be formed by the Chair to organise a call for applications, probably via the Feb. 2010 Newsletter.

It was also agreed that all past and future Newsletters, where possible, will be made freely available as PDF files via IQUA's website in a move to encourage Quaternary research in Ireland and IQUA membership. S.McCarron and F. Ludlow are to begin this process this year.

4. IQUA 2009 Annual Fieldtrip

Unfortunately, due to a change in circumstances, the proposed fieldtrip to Donegal has been cancelled.

Members with ideas for alternative possible short trips to run in Lets Sept./Early October to allow a (one day?) field visit by the membership should communicate these to any member of the IQUA committee.

If alternate arrangements can be made, more information will be broadcast through the IQUA e-mail Listserver and Website Meetings page.

5. IQUA 2009 Autumn Symposium

IQUA Symposium 2009: Quaternary Genetics

Date: Friday 27 November 2009

Venue: Geological Survey, Beggar's Bush, Dublin

Coordinator: Fraser Mitchell, School of Natural Sciences, TCD.

This year the IQUA Symposium will address the theme of Quaternary genetics. Speakers will address a range of topics that draw on molecular analysis of plant and animal material from different Quaternary contexts. The symposium will highlight the huge potential for molecular work on the wide range of Quaternary material that people are working on in Ireland. Consequently the symposium should appeal equally to those from Quaternary and molecular backgrounds.

So far the confirmed speakers are:

Ian Barnes, Royal Holloway
Ceiridwen Edwards, Oxford
Richard Bradshaw, Liverpool
David MacHugh, UCD
Ron Pinhasi, UCC
Steve Waldren, TCD

Further queries concerning the symposium should be addressed to Fraser Mitchell, TCD, fraser.mitchell@tcd.ie, and further details will be available closer to the time via IQUA's website. Registration is normally between 9-9.30 and there will be a small cover charge. No pre-booking is necessary.

6. IQUA Spring Meeting, 2009

Contributing abstracts:

Late Quaternary calcareous nannofossil assemblages: a new method of distinguishing the deposits of different interglacials in the Northeast Atlantic?

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Calcareous nannofossils are a useful biostratigraphic tool from their first appearance in the early Jurassic. However, late Quaternary marine sediments can only be dated with reference to a shift in domination from *Gephyrocapsa* spp. to *Emiliana huxleyi* at ~61 ka. Notably, since Marine Isotope Stage 9 (~300 ka) there may be a pattern whereby different nannofossil species locally dominated assemblages during different interglacial periods in the North Atlantic. The study reported here utilises a gravity core dataset from slopes on the western flank of the Porcupine Bank. A coherent 3-D stratigraphy has been developed and the cyclic variation of lighter carbonate-rich layers and darker muddier, lithic-rich sediments are thought to reflect glacial/interglacial cycles. This is supported by proxy data ($\delta^{18}\text{O}$, $\delta^{13}\text{C}$, Ice Rafted Debris and foraminifera assemblage curves). Putative interglacial deposits were sampled for examination of their calcareous nannofossil content with the aim testing whether species-dominating assemblages can be recognised and linked to specific interglacial periods. The results suggest late Quaternary nannofossil assemblages do identify interglacial deposits as follows: *Emiliana huxleyi* = MIS 1, *Gephyrocapsa muelleri* = MIS 5, small *Gephyrocapsa* spp. = MIS 7 and *Gephyrocapsa caribbeanica* = MIS 9. The calcareous nannofossil assemblages can thus be used to support correlation of interstadials between cores.

Holocene environmental change in the Albertine Rift: evidence from high-altitude sites in southwest Uganda

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The Holocene period (i.e. the past ca. 11,500 years) in tropical Africa has been punctuated by numerous decadal- to millennial-scale climatic perturbations, including prolonged drought periods, although there is little consensus regarding the timing, magnitude and causes of such events. Moreover, little is known on how such events impacted tropical high-altitude ecosystems, which are thought to be among the most sensitive areas to environmental change. A widespread shift to drier conditions ca. 4,000 years ago is evident at several sites across tropical Africa, but again, additional information is required in order to understand the effect that such a climate shift may have had on sensitive high-altitude

ecosystems. Other externally-induced stresses (such as fire, grazing and volcanic activity) are also likely to play an important role in highland ecosystem dynamics, the impacts of which may be enhanced by climate change, although relatively little attention has been paid to their effects.

This research aims to reconstruct environmental changes in the Virunga volcanoes – high-altitude sites associated with the Albertine Rift in southwest Uganda – during the Holocene period, with a particular focus on the latter part of the Holocene. Multi-proxy analyses of sediment cores extracted from crater sites on two of the Virunga volcanoes is ongoing, with the aim of assessing temporal variations in vegetation distribution and in aquatic ecosystem and catchment conditions, in order to provide an additional dimension to our understanding of high-altitude ecosystem change during the Holocene in a climatically-sensitive area of tropical Africa.

Climate change and the adoption of agriculture in Ireland

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This project addresses the question of how past human societies in North Co. Mayo responded to changes in climate and their environment. The project will generate new palaeoclimatic and palaeoenvironmental data focusing on earlier prehistory (Neolithic – Bronze Age). This new data will complement long standing and ongoing UCD research focusing on the Mesolithic and Neolithic of North Mayo – broadly incorporating the adoption and decline of early agriculture in the region. The data will provide multiple proxies for palaeoclimate in the region. This will include the production of Holocene quantitative chironomid-inferred temperature reconstructions, use of an Itrax core scanner, chironomid-isotope data and pollen analysis.

Existing research in North Mayo provides a strong archaeological and environmental understanding of settlement, and the Céide fields are important internationally in discussions of Neolithic settlement. Many recent models across Europe have suggested that events such as the adoption of agriculture in Europe are climatically driven and hints of this relationship are present in existing North Mayo data. The environmentally sensitive nature of the area means that North Mayo is an ideal case study for the relationship between climate change and changes in human settlement. We selected a

number of lakes for study, and a recent fieldtrip was successful in obtaining sediments from two of these.

New insights on giant deer (*Megaloceros giganteus*) paleobiology inferred from stable isotope and cementum analysis

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⁵ *National Museum of Ireland - Natural History, Merrion Street, Dublin 2, Ireland*

The extinct giant deer, *Megaloceros giganteus* (popularly referred to as the Irish elk) was among the largest and most famous of the cervids. Although *Megaloceros* remains have been uncovered across Europe and western Asia, the highest concentrations come from Irish bogs and caves. Over the centuries, *Megaloceros* has enjoyed a great deal of scientific attention; however, little paleobiological study beyond morphometric or distributional work has been done. We report here the first stable isotope analysis of *Megaloceros* tooth enamel, which we combine with dental cementum accretion analysis in order to document age, diet and life-history seasonality of each specimen from birth until death. $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ measured in the enamel of the second and third molars from seven individual giant deer indicate a primarily grass and forb based diet supplemented with browse and a season of birth occurring in spring/early summer. Cementum data indicate an age range of 6.5 to 14 years and that they possessed mature antlers by autumn, similar to extant cervids. The data presented in this study imply that *Megaloceros* would have indeed been vulnerable to extirpation during the End Pleistocene in Ireland, and the circumstances of habitat decline and climatic instability under which *Megaloceros*' extirpation occurred make this information highly relevant.

Early settlement on a lakeside esker in North Tipperary

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(Sponsors: Archaeology Department, University College Cork and National Roads Authority, Dublin)

The site of the Tullahedy mound is located in the southern part of the central lowland of Ireland. (Most of the hillock has now been cleared away in order to make way for an interchange along the new N7 road.) The immediate landscape comprises a depressed tract that forms part of the Shannon River Basin. This curving feature, which is between one and two kilometres wide, is here named the 'Carrigatogher valley'. The Arra Mountains, which are formed from Lower Palaeozoic and Old Red Sandstone bedrock, lie to the west of the valley while the limestone 'plain of Nenagh' is to the east. Shortly before its destruction, the mound was identified as a key archaeological site. The consequent series of excavations, completed between 1997 and 2006, showed that a settlement and enclosure of early Neolithic date had been established on its flanks. (The core of the feature had already been pitted for sand and gravel).

Reconstruction of the post-glacial history of the site was attempted. Based on its geomorphology, stratigraphy and sedimentology, the mound is interpreted as a short, esker bead that was deposited in a high-level, ice-contact lake (see Warren & Ashley, 1994). The Carrigatogher valley appears to have been a major outwash channel during de-glaciation. Layers of till and cobble till cover the entire hillock and these are thought to mark a later phase of melting and deposition. Onlapping deposits of white marl and peat, which almost surround the enclosure, are interpreted as successive low-level lake and fen peat environments. A lake shoreline exposed in cuttings excavated on the south-eastern side of the esker is taken to be evidence that the ground below the 50 m contour was flooded during the early Neolithic period. If this thesis were correct, then ribbon-shaped lakes would have then occupied the Carrigatogher valley. The encroachment of the fen peat is thought to post-date occupation.

Thus, the small height probably attracted early settlement because of its strategic position within a marginal environment. The depressions on the sides of the esker are interpreted as naturally formed hollows and one of these provided shelter for structures. The unconsolidated deposits provided further geological advantage because they allowed the Neolithic people to excavate deep pits and foundation trenches. It is thought that they later used the granular spoil from their excavations to 'landscape' the sides of the mound.

Testing the utility of a combined geochemical and microfossil-based approach to sea-level reconstruction in western Ireland

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Ice sheet response to climate change is a key factor in predicting sea-level rise. Relative sea-level (RSL) data from western Ireland can provide critical constraints on geophysical models that describe the interplay between glacioisostatic rebound and eustatic sea level rise in an area formerly covered by a dynamic ice sheet. Despite this, traditional methodologies have produced virtually no precise RSL data in the region, although thick sedimentary sequences do exist. This project will assess the use of a novel combination of geochemical (C/N, $\delta^{13}\text{C}$) and microfossil (foraminifera) RSL indicators to fill this fundamental knowledge gap and test existing models of change.

Initial results from offshore coring, Porcupine Bank

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Recent investment in research physical infrastructure within Irish Universities will allow a significant expansion of the capacity within Ireland to analyse archives of environmental change, including those available from the GIS/MI Infomar programme. Coring of sediment piles on the western shallow shelf areas and in deeper waters has sediment cores of 2-3m length from a number of locations. Work is underway to characterise these sediments using the new infrastructure (e.g. the Multi Sensor Core Logger at NUIM) by a number of Irish research groups with the support of the GSI and Marine Institute. Some initial results of core scanning show exciting significant variations in key physical properties that perhaps point to ice-ocean interactions around the Last Termination.

Poster presentation:

Holocene vegetation dynamics and human impact in north-west Sligo, western Ireland: first results from investigations at Lough Dargan, near Ballygawley

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The first results from palaeoecological investigations centred on north-west Sligo will be presented. The project aims at reconstructing woodland dynamics and human impact in a part of Ireland where the archaeological evidence for human settlement is particularly strong. Results from earlier palaeoecological investigations in the region will be considered and the first results from investigations of a long lake core from Lough Dargan, near Ballygawley will be presented. Particular attention will be paid to local woodland dynamics and the effects of early farming on the natural environment.

7. Notices

Announcement of IPEAN, the Irish Palaeoecology and Environmental Archaeology Network

IPEAN is a new initiative which will operate through the website www.ipean.ie, planned to come online in September 2009. The aims of the network are threefold:

To act as a directory of palaeoecologists and environmental archaeologists working in Ireland or on Irish material.

To provide a resource through a calendar of events, tender and job advertisements, email extensions and the possibility of a forum.

To facilitate communication between the different branches of environmental archaeology and palaeoecology and so help address common issues.

IPEAN is a private initiative open to environmental archaeologists and palaeoecologists with a postgraduate qualification in their field. For more information contact Bettina Stefanini at ipean2009@gmail.com

Join/Renew IQUA membership online via PayPal

IQUA now offers a fast, safe, online payment system already familiar to many (**PayPal**) for joining IQUA or renewing your membership (!!!) and for purchasing past field guides (where available).

Prices are the same as for those joining/renewing by post, namely, €15 Waged or €10 for students/unwaged per year.

PayPal allows you to pay securely with your credit/debit card via the IQUA website. Please see the link below. Simply click on the relevant "Pay Now" button and follow the on-screen instructions.

Upon completing the process, you will receive a confirmation receipt from PayPal, and shortly thereafter confirmation from the Treasurer of your membership status.

For the convenience of members, we are also offering a three year membership option with automatic billing. PayPal will automatically debit your credit/debit card each year for the relevant amount (either €15 or €10). This happens each year on the date you initially join/renew. To try this option, click on the relevant "Subscribe" button. You can cancel the automatic billing any time before the three year period is up by contacting the Treasurer (currently: ludlowf@tcd.ie).

http://www.tcd.ie/Geography/IQUA/Member/Mem_Hme.htm

Online purchase of a field guide will result in an e-mail being dispatched to the Treasurer about your purchase which will then be forwarded to the publications secretary.

Francis Ludlow, TCD.

8. Recent Publications

Coxon, P. and McCarron, S.G. 2009. Cenozoic: Tertiary and Quaternary (until 11,700 years before 2000), in Holland, C.H. and Sanders, I.S. (eds) *The Geology of Ireland*, 2nd ed., Dunedin, Edinburgh, pp 355-396.

Greenwood, SL & Clark, CD. 2008. Subglacial bedforms of the Irish Ice Sheet. *Journal of Maps*, v2008, 332-357.

Knight, J. 2009. Infilled pocket gopher tunnels: seasonal features of high alpine plateaux. *Earth Surface Processes and Landforms*, 34 (4), 590-595.

Knight, J., Burningham, H. and Barrett-Mold, C. 2009. The geomorphology and controls on development of a boulder-strewn rock platform, NW Ireland. *Journal of Coastal Research, Special Issue*, 56, 1646-1650.

Knight, J. and Harrison, S. 2009. Sediments and future climate. *Nature Geoscience*, 3 (4), 230.

Knight, J. 2009. Subglacial erosion forms in northwest Ireland. *Boreas*, 38 (3), 545-554.

Knight, J. and Harrison, S. (eds) 2009. *Periglacial and Paraglacial Processes and Environments*.

Geological Society Special Publication 320, 272pp.
ISBN 978-1-86239-281-6.

Knight, J. 2009. The limitations of Quaternary lithostratigraphy: an example from southern Ireland. In: Knight, J. and Harrison, S. (eds) *Periglacial and paraglacial processes and environments*. Geological Society Special Publication 320, 165-180.

Knight, J. and Harrison, S. 2009. Periglacial and paraglacial environments: a view from the past into the future. In: Knight, J. and Harrison, S. (eds) *Periglacial and paraglacial processes and environments*. Geological Society Special Publication 320, 1-4.

Roche, J.R., Mitchell, F.J.G. and Waldren, S. 2009. Plant community ecology of *Pinus sylvestris*, an extirpated species reintroduced to Ireland. *Biodiversity and Conservation*, 18(8), 2185-2203.

Wilson, P., Vincent, P.J., Telfer, M.W. & Lord, T.C. 2008. Optically Stimulated Luminescence (OSL) dating of loessic sediments and cemented scree in northwest England. *The Holocene* 18, 1101-1112.

Wilson, P. 2009. Storurdi: a Late Holocene rock-slope failure (sturzstrom) in the Jotunheimen, southern Norway. *Geografiska Annaler* 91A, 47-58.

Wilson, P. 2009. Rockfall talus slopes and associated talus-foot features in the glaciated uplands of Great Britain and Ireland: periglacial, paraglacial or composite landforms? In: Knight, J. & Harrison, S. (eds), *Periglacial and paraglacial processes and environments*. The Geological Society, London, Special Publications 320, 133-144.

9. Recent Events

The 7th International Drumlin Symposium, Westport, Co. Mayo, April, 2009

Organiser: Dr Jasper Knight

The 7th International Drumlin Symposium was held April 23-26 in Westport, Co. Mayo. Organized by Jasper Knight of the University of Exeter, and supported by Exeter and INQUA, the symposium was attended by about 30 geomorphologists, sedimentologists, geophysicists, and theorists from the United Kingdom, Sweden, Norway, Denmark,

Finland, Austria, Canada, the USA, and of course, the Republic of Ireland. The origin of drumlins is still hotly debated in research papers, but the intimate setting of this symposium against the stunning backdrop of the appropriately heavily drumlinized Clew Bay, facilitated open discussion during talks, posters, and fieldtrips. Presentations roughly fell into three categories of drumlin genesis, drumlin morphometrics, and subglacial landforms and sediments associated with drumlins. While no consensus on drumlin genesis was reached at the symposium, two noteworthy new findings were presented. Based on mapping of thousands of drumlins in the UK, Chris Clark's palaeoglaciology group from the University of Sheffield demonstrated that what we recognize as the "classic drumlin shape" (asymmetric; steep upflow facing slope; tapering in the downflow direction) appears not to be so classic, and some drumlins are only a few meters long. Also, Ed King of the British Antarctic Survey provided geophysical evidence for drumlins forming in less than a year beneath the Rutford Ice Stream in Antarctica. While neither finding helps us understand the specifics of drumlin genesis, they are useful in informing us about the variety of drumlin types that exist and the dynamic nature of the landscape that drumlins form in.

During two and a half days of field trips we visited many drumlin exposures and associated landforms in Clew Bay, Connemara, Galway Bay and the Burren. With so many drumlin experts in attendance, the discussion was lively and productive. Interestingly, everyone agreed that there was evidence present for sediment deformation, debris/slurry flow deposition and in some places truncation of the sediments at the drumlin surfaces; all components of the major drumlin theories that currently exist. This clearly demonstrates that we have a long way to go to reach a unifying theory on drumlin formation, or perhaps more simply, a unifying theory does not exist. We all look forward to the next Drumlin Symposium which will be hosted in Buffalo, New York, USA.

Mandy J. Munro-Stasiuk, Department of Geography, Kent State University, Kent, Ohio USA (mmunrost@kent.edu)

Schools Geoscience Essay Competition: 'My Erratic Rock'

The 2008/9 'My Erratic Rock' essay competition run by the GSI Quaternary Section recently concluded with each of the five winning pupils receiving a cheque for €300 with the overall winning entry

receiving an additional €1000 as well as the Maxwell Henry Close Award. The school of the Maxwell Henry Close Award winner also receives a prize of digital equipment to the value of €1,500. The award is in honour of the 19th century eminent Irish geologist of international repute, the Rev Maxwell Henry Close. Born in 1823 he was the first to understand the comprehensive and complex way in which Ireland was glaciated during the Ice Age and he introduced both the term drumlin and our understanding of such features to the international literature. Dónal Mac Géidigh, from Pobalscoil Cloich Cheann Fhaola in County Donegal was the overall winner and recipient of the 2009 Maxwell Henry Close Award for his essay entitled 'Cloch Mhór Léim an tSionnaigh. Croithlí Tír Chonaill.'

This essay competition is one of the planned legacies of Ireland's involvement in the International Year of Planet Earth (IYPE). More information about the competition and details of the 2009/10 competition can be found at www.planeteearth.ie/erratics or contact: Enda Gallagher, 01 678 2834 or enda.gallagher@gsi.ie.

Enda Gallagher & Michael Sheehy, Geological Survey of Ireland.

10. Forthcoming Talks, Workshops Seminars & Conferences

IQUA Symposium 2009: Quaternary Genetics

Date: Friday 27 November 2009

Venue: Geological Survey, Beggar's Bush, Dublin

Coordinator: Fraser Mitchell, School of Natural Sciences, TCD.

"SEABED 10" Conference – Dublin 6-7 Oct 2009

Ireland's Seabed Mapping Programme - INFOMAR Annual Seminar / INSS

Ireland's seabed mapping programme is now 10 years old and it is planned to mark the anniversary by hosting a two day conference in Dublin this October. The partners in the programme – GSI and the Marine Institute – will organise a comprehensive conference programme covering a review of activities to date (including both the INSS and INFOMAR programmes), research based on survey data, noteworthy achievements and plans for the future.

The conference, which will be free, will incorporate the annual "seabed seminar" which usually provides a detailed review of that particular year's activity.

The conference, which will also host a poster exhibition, will see the formal launch of GSI's new inshore mapping vessel, the *RV Keary*. The conference dovetails neatly with the latest Griffith's Geoscience Research seminar.

Further details, including the conference programme, location and registration information, will be provided on both www.gsi.ie and www.infomar.ie in due course. In the meantime however if you might be interested in attending this event please contact enda.gallagher@gsi.ie to receive further information.

The Annual Irish Earth Observation Symposia: A potted history and call for participation in IEOS09

Michael Sheehy, Geological Survey of Ireland (GSI), Fiona Cawkwell, University College Cork (UCC), Ned Dwyer, Coastal and Marine Resources Centre (CMRC) & Stuart Green, Teagasc.

Stuart Green ran the first day long Earth Observation (EO) symposium in Teagasc, Kinsealy in November 2007. The meeting are designed "to bring together Earth Observation and remote sensing researchers in order to better comprehend the 'state-of-play' in Ireland and to foster future collaborations." The meeting attracted an audience of approximately 45 academic, industry and agency/public body representatives, with a series of short presentations and posters from these sectors. The academic sector was strongly represented within the programme, often illustrating academia's cooperation with public and industry sectors in addressing topics of mutual interest. Enterprise Ireland (EI) representatives introduced themselves and their organisation to the group, gave details of bids under the 2007 European Space Agency (ESA) Ireland/Luxembourg Announcement of Opportunity, and judged the student poster competition.

Nearly 70 delegates attended the second symposium in November 2008, with the theme of opportunities for EO in Ireland, ran over two days and was hosted by the National Maritime College of Ireland (NMCI) in Ringaskiddy Co. Cork, coordinated by Fiona Cawkwell and Ned Dwyer. Paul Aplin, University of Nottingham, and president of the UK Remote Sensing and Photogrammetry Society (RSPSoc) delivered the keynote presentation "Addressing Opportunities for Earth Observation in Ireland." Aplin made a strong case

for Irish involvement with the RSPSoc, through the society's Special Interest Groups (SIGs) and/or the main society, as a ready made coordination mechanism for the Irish EO community. The UK and Irish EO communities will have further opportunities for closer co-operation with the 2010 annual RSPSoc conference being held in Cork.

The venue for IEOS09 is the Geological Survey of Ireland. The meeting is a forum for earth observation researchers to present their work in a colloquial environment alternating from year to year between an academic institution and a public/industry setting; a vehicle for academic, public sector and private sector organisations to showcase data and products; and the significant EO networking event on the Irish calendar where new and established remote sensing practitioners can meet and exchange ideas. One of this year's objectives is to broaden participation to build more powerful and effective networks amongst Ireland's earth science and remote sensing specialists.

The theme of this year's symposium will be Earth Observation in Ireland: Acquisition, Analysis and Application. The notice for the 1st call for abstracts on this theme and details about student prizes can now be seen on www.gsi.ie. We encourage all IQUA members to consider attending if applicable, and/or to promote the event within their respective organisations.

Clare Island Survey Celebrations: Talks by the Heron-Allen Society, 2nd October, 2009

As part of the Royal Irish Academy's celebration of the Clare Island Survey "Darwin, Praeger and the Clare Island Surveys" which runs until 14th December

(<http://www.ria.ie/library%2bcatalogue/events.html#darwin>)

the Heron-Allen Society will be holding a series of talks relating to the involvement of Edward Heron-Allen in the original survey on Friday 2nd October from 2-4:30pm (see Links below for more details).

Edward Heron-Allen was a polymath, distinguished scientist and Fellow of the Royal Society, who played a major role in the foraminiferal component of the survey. He was also a meticulous recorder of events and compiled a travel journal during his time on Clare Island that provides a revealing insight into the conditions of the time. The talks which include extracts from his travel journal should be of general interest to IQUA members, and is free although booking is required. Bookings can be made via the RIA website (<http://www.ria.ie/events/>) and more

information on Edward Heron-Allen, expert on Foraminifera, world authority on asparagus cultivation, violin maker, Egyptologist, chiromancer, self-taught scholar of ancient Persian texts and author of esoteric fiction (to name but a few of his talents) can be found at http://www.nhm.ac.uk/hosted_sites/heronallen/society.htm

11. General Membership Items

Renewal of Membership

Please let your students/ colleagues know about IQUA and encourage them to join.

If you do not have access to our online PayPal system, which is our preferred method of dues collection, please cut out and complete the form below and send it with the relevant annual subscription to the Treasurer of IQUA:

Irish Quaternary Association

Renewal of Membership

Full members €15.00 (£10); students and unwaged €10.00 (£7)

Name:

Address: _____

Telephone:.....

E-Mail:.....

Amount paid.....

Please also check the date on your address label (e.g. on Newsletter envelope) and contact the Treasurer if you think it is incorrect.

Treasurer:
Mr Francis Ludlow, Dept. of Geography, TCD, Dublin 2.

Cheques should be made payable to IQUA. It is suggested that members pay two or three years

subscription on a single transaction, to cut down on bank charges and maintain an active membership for a longer time period.

IQUA will accept Sterling cheques, although a small handling charge will be incurred.

IQUA e-mail listserver:

<https://listserv.heanet.ie/iqua-l.html>

If you are not receiving IQUA listserv emails, please sign up to the list at the location above. A request for subscription to the IQUA-L list goes initially to the list moderator first for cross-referencing with the current membership list.

S. McCarron, IQUA-L Moderator

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