IQUA IRISH ASSOCIATION FOR QUATERNARY STUDIES

IQUA NEWSLETTER

October 1992 NS 9

ISSN 0790-4096 Edited by Peter Wilson

INTRODUCTION

With the intention of attracting more postgraduate students into IQUA membership, I have introduced a 'New Postgraduates' section to this Newsletter. Although this only consists of names and research themes, the fact that six new postgraduates have recently begun work on Quaternary topics, suggests that throughout Ireland there must be approximately 30-40 postgraduates currently engaged in Quaternary research at home or abroad. Such a number further suggests that Quaternary research is in a healthy position, but the absence of many of these students from the ranks of IQUA is a cause for concern. So, I appeal to those postgraduates that are in membership to persuade your fellow students into joining you as an IQUA member. I would particularly like to receive short (1 side of A4, single spacing) accounts of ongoing postgraduate research, so that these projects are known of by the wider membership. The next edition of the Newsletter is scheduled for April and contributions should reach me by the end of March.

Peter Wilson (University of Ulster).

REPORTS OF RECENT MEETINGS

IQUA Annual Field Trip - The Burren, Co. Clare, 2nd-4th October 1992

The field trip this year was to the Burren, an area previously not visited by IQUA. The trip promised a great variety of topics to be covered and some intriguing questions to be answered. Luck was with us as regards the weather, with only a few showers on Saturday. There were a number of contributors. The guide book was not available for the meeting, but will be published in due course. An ample number of hand-out were

provided. A total of 35 participants attended giving a highly conspicuous cavalade of vehicles across the Burren.

After the introductory talk in Hylands Hotel, Ballyvaughan, on the Friday evening, the group set off up the Ballyvaughan valley to a vantage point where David Drew introduced the geology and karstic geomorphology of the Burren, and Paul Gosling the archaeology of the area. This was followed by a visit to Poulnabrone dolmen and sites at Poulawack. Onwards towards Lisdoonvarna and a drumlin site described by Willie Warren. Further glacial sediments were seen at Pollsalach. After lunch the ancient field systems at Ballyelly on the north-western slope of Slieve Elva were visited. After a sprint up the Cahir valley, Michael O'Connell described the palaeobotanical investigations at Lios Lairtlun Mor where a sharp wind and descending darkness induced some amusing reparteé.

Sunday morning saw a schism! One half went cave hunting with David Drew, while the rest went drumlin hunting at Aughinish on Galway Bay. Both groups were amply rewarded. On the way to Mullaghmore, the drumlin group stopped briefly at a drumlin exposure near Tulla, which was described by Tom Finch. The whole group reassembled at Mullaghmore where Bill Watts ably described the palaeobotanical work done in the area. A general discussion ensued on the vegetation and glacial history of the area. The group then retired to Corofin for lunch before dispersing.

Thanks go to the many contributors - Willie Warren, David Drew, Paul Gosling, Michael O'Connell, Bill Watts and Tom Finch - and anybody I have forgotten.

Ronnie Creighton (Geological Survey of Ireland).

8th International Palynological Congress

The International Palynological Congress, held every four years, took place in Aix-en-Provence from 6-12 September. Some 800 palynologists, mainly from Europe and North America but with most countries at least represented, took part in this well-organised pollen extravaganza that consisted of four and a half days of lectures and poster sessions (from 8.00 to 18.00 or 19.00 hr) with a mid-week break for a day-long tour (6.00 hr until after midnight!) of the Carmargue.

The statistics of the meeting are mind-boggling - 580 lectures organised in 26 symposia and with a different poster session on each of three days, during which 260 posters in all were presented. The proximity of lecture theatres and strict adherence to the programme timetable ensured that, by and large, one could get to one's choice of lecture, even if that choice was difficult to make especially when, as frequently happened, two or more lectures with promising titles were scheduled for the same time.

For the Irish participant (and the Irish - both those working in Ireland and in foreign lands - were well represented), there was much of interest in this Conference. Several papers detailed fresh evidence for a Younger Dryas oscillation (c. 11,000-10,000 B.P.) in eastern North America (as little as a decade ago this was still largely regarded as a solely NW European phenomenon). More surprisingly, a pre-Younger Dryas climatic oscillation, involving a distinct amelioration, was reported from maritime Canada and named the Killarney Oscillation. With such a name, that oscillation can hardly have failed to leave its mark on this side of the Atlantic. We also heard that Lake Gosciaz, a varved lake in central Poland, had a Younger Dryas of c. 1600 sidereal years, i.e. twice as long as the comparable sequence recently reported from a varved Swiss lake.

The most popular sessions, at least in terms of numbers of lectures, were those dealing with the effects of human activity on vegetation. The role of human activity in altering the natural environment in several parts of the world was charted on the basis of the pollen evidence. In addition, there were presentations on the use of supplementary evidence available from fossil fungal spores, charcoal, mineral matter derived from soil erosion, and pollen diversity in reconstructing the effects of past human impact. New evidence for the nature of the Elm Decline at Diss Mere, Norfolk, was presented and it was convincingly argued that, at this particular site, it should be primarily attributed not to human impact nor to climatic change but rather to a disease epidemic with characteristics similar to those associated with recent outbreaks of Dutch Elm disease.

For those of us who still have problems organising their pollen or pollen-like data (e.g. results of particle-size analysis or chemical data from a vertical sequence of samples) in a format suitable for inspection and/or publication, there was good news that a new version (V. 2.0) of the plotting program *Tilia* will be available before the end of 1992. We are assured by the author (Dr. E.C. Grimm, Illinois State Museum, 1920 South 10.5 Street, Springfield, IL 62703, USA), that most of the suggestions made by the numerous existing devotees of this most versatile piece of software have been taken on board in the new version.

In conjunction with the Conference, nine excursions to various parts of France and the adjoining regions were organised. The author of this piece was one of four from Ireland (out of a total of 30 participants) on the excursion which dealt with 'Long pollen sequences', including the classic sites of Grande Pile and Les Echets. Certainly, the organiser of the excursion, Dr. J.-L. de Beaulieu and his able co-contributors, are not to blame if interglacial and longer pollen sequences continue to prove evasive and elusive in Ireland.

It will be of interest to many members of IQUA to hear that one, Eric Colhoun, considerably enlivened the debates on the evidence for glacial advance and retreat in the Alps, Jura and Voges regions during the course of the 'Long pollen sequences' excursion. Eric, originally from Newcastle, Co. Down, is now Professor of Geography in the University of Newcastle, E.

Australia. He reminded the present incumbent that he was the first Honorary Secretary of IQUA at a time when Frank Mitchell was Chairperson. He sends kindest regards to former colleagues and friends in Ireland.

Michael O'Connell (University College, Galway).

Fourth International Drumlin Symposium and INQUA Working Group on Subglacial Processes and Sediments, Coleraine, 4-6th July 1992

The symposium was preceded by a one-day field trip and followed by a field workshop (6-11th July) in the west of Ireland. Forty-six participants attended from ten countries and provided a good spread of expertise from contrasting glacigenic settings. Thirty papers were formally presented. Selections of these with other submissions will be published later this year in a special issue of *Sedimentary Geology*.

The first day session contained a wide range of themes which included terminal zone sedimentation, push ridges, large-scale ice-moulded landforms, floods, influence of bedrock relief, theoretical models, stoss-side sedimentation and subglacial eruptions. Examples at a veriety of scales were described from Antarctica, Canada, USA, Europe and New Zealand. The second day session mainly involved description and interpretation of the internal structure and form of drumlins and related subglacial bedforms. Examples came from Poland, Germany, Finland, USA, Canada and Ireland. Topics covered included overridden waterlain tills, subglacial sediment deformation, drumlins with interstadial and interglacial sediments, buried weathering profiles, large-scale bedforms, Rogen moraines and overridden glaciomarine sequences. Discussions following the final paper session explored the diverse problems of drumlin genesis especially the glaciological implications and sedimentological evidence. Finally, striking blackboard cartoons depicting deformational, erosional, depositional, migratory bedforms, and stratigraphic architecture provided a theoretical framework for the following field workshop.

The pre-symposium field trip examined drumlin swarms of Co. Down and the fringing glaciomarine aprons. The post-symposium workshop focussed on the environmental significance of drumlin architecture along the main bays of the Atlantic seaboard. Evidence was presented to show that ice-proximal glaciomarine conditions preceded drumlinisation. As in eastern Ireland, it was concluded that H.R.S.L. and glaciomarine sedimentation are closely associated with the stratigraphic architecture of the drumlins as ice moved westwards onto the continental shelf. Evidence for substantive deformation of drumlin sediments is absent and the forms are largely erosional in origin.

Many of the themes highlighted are presented in a 236-page work entitled *Glacial Sedimentology of northern and western Ireland* (price £8 and available from A.M. McCabe).

A.M. McCabe (University of Ulster).

NEW POSTGRADUATE STUDENTS IN QUATERNARY RESEARCH

Trinity College, Dublin

Andrew Connolly - The development and vegetation dynamics of Clara Bog, Co. Offaly, and the heritage of the surrounding landscape.

Sebastian von Engelbrechten - Late and Postglacial vegetation history of the Sierra de Urbion, N.E. Spain, with particular reference to the dynamics of *Fagus sylvatica*.

University of Ulster at Coleraine

Philippe McClenahan - Sea level rise and coastal dunes in Europe.

University College, Galway

Eneda Jennings - Fossil pine on western blanket bog with particular reference to climatic change during the mid-Holocene.

Queen's University, Belfast

Neil Ogle - Measurement and modelling of delta C-13 in Irish oaks.

Janine Moore - C-14 in the mixed layer of the North Atlantic.

RECENT PUBLICATIONS ON QUATERNARY RESEARCH IN IRELAND

CARTER, R.W.G., BAUER, B.O., SHERMAN, D.J., DAVIDSON-ARNOTT, R.G.D., NORDSTROM, K.F. and ORFORD, J.D. 1992. Dune development in the aftermath of stream outlet closure: examples from Ireland and California. In: *Coastal Dunes: Geomorphology, Ecology and Management for Conservation*, (Eds. Carter, R.W.G., Curtis, T.S. and Sheehy-Skeffington, M.J.), Balkema, Rotterdam, 57-69.

FOLEY, M. 1992. A discussion on the morphological characteristics of a sand dune complex at Long Strand, Co. Cork, using a computer-generated morphological map. In: *Coastal Dunes: Geomorphology, Ecology and Management for Conservation*, (Eds. Carter, R.W.G., Curtis, T.S. and Sheehy-Skeffington, M.J.), Balkema, Rotterdam, 113-117.

JELIČIÉ, L. and O'CONNELL, M. 1992. History of vegetation and land use from 3200 BP to the present in the north-west Burren, a karstic region of western Ireland. *Vegetation History and Archaeobotany* 1, 119-140.

McCABE, A.M., DARDIS, G.F. and HANVEY, P.M. 1992. *Glacial sedimentology in northern and western Ireland.* Pre- and Post Symposium Field Excursion Guide Book, Anglia Polytechnic, Cambridge.

QUIGLEY, M.B. 1991. *A guide to the sand dunes of Ireland.* European Union for Dune Conservation and Coastal Management.

SCOURSE, J.D., ALLEN, J.R.M., AUSTIN, W.E.N., DEVOY, R.J.N., COXON, P. and SEJRUP, H.P. 1992. New evidence on the age and significance of the Gortian temperate stage: a preliminary report on the Cork Harbour site. *Proceedings of the Royal Irish Academy* 92B, 21-43.

WILSON, P. 1991. Buried soils and coastal aeolian sands at Portstewart, Co. Londonderry, Northern Ireland. *Scottish Geographical Magazine* 107, 198-202.

WILSON, P. 1991. Sediment clasts and ventifacts from the north coast of Northern Ireland. *Irish Naturalists' Journal* 23, 446-450.

WILSON, P. 1992. Small-scale patterned ground, Comeragh Mountains, Southeast Ireland. *Permafrost and Periglacial Processes* 3, 63-70.

WILSON, P. 1992. Trends and timescales in soil development on coastal dunes in the north of Ireland. In: *Coastal Dunes: Geomorphology, Ecology and Management for Conservation*, (Eds. Carter, R.W.G., Curtis, T.S. and Sheehy-Skeffington, M.J.), Balkema, Rotterdam, 153-162.
