



IQUA IRISH ASSOCIATION FOR QUATERNARY STUDIES

IQUA NEWSLETTER

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Edited by Peter Wilson

INTRODUCTION

By all accounts, those (including myself) who didn't attend the Annual Field Meeting on Clare Island missed a wonderful weekend under the direction of Peter Coxon and Michael O'Connell. The next IQUA event also promises to be extremely interesting and stimulating - the November symposium entitled Sea-level Changes and the Coastal Environment. Cathy Delaney has managed to assemble some of the leading coastal scientists (excluding myself) in both Ireland and Britain to speak at this meeting. As no other notification of this event will be circulated, it is important to put the date in your diary now. Details of the meeting can be found on pages 3-4.

Enclosed with this Newsletter is an IQUA information sheet which aims to inform interested people on the role of IQUA and ultimately increase our membership. The Committee would be grateful if you could pass this on to a colleague or friend. Additional copies can be obtained from Fraser Mitchell. It would be appreciated if these could be distributed at national meetings of geographers, geologists, botanists and archaeologists.

Peter Wilson (University of Ulster).

REPORTS OF RECENT MEETINGS

IQUA Annual Field Trip - Clare Island, 16th-18th September 1994

Slightly foot-sore, a little weary and much enlightened about the geology, archaeology and palaeoecology of Clare Island, Co Mayo, is a fitting description of the participants at this year's Annual Field Meeting. Veterans of these excursions will know that the usual mode of travel is a convoy of cars but this year the vehicles were left at Roonagh Quay. On

went the boots, all aboard the ferry and off to walk over a wonderful range of sites on Clare.

Peter Coxon and Michael O'Connell had produced a very detailed Field Guide to Clare Island and Inishbofin. We noticed that the Guide came with a good strong waterproof cover. A wise choice considering how it can rain on our west coast islands. However, rain was never much of a problem. Saturday was glorious and Sunday only a bit wet from time to time.

Presently there is a great upsurge of interest in Clare Island. The new Clare Island Survey is underway and as this major re-assessment of the island's features continues, much new information about the Quaternary history is emerging. For example, the island's archaeology is much richer than was suspected previously. Paul Gosling showed us a fine Neolithic court tomb and examples of the numerous Bronze Age cooking sites, the fulachta fia, which have been detected recently all over the island. Some of these are under investigation by the Geophysics staff of UGC who gave a demonstration of a number of non-invasive techniques now used by archaeologists.

Christie Lawless went on to describe how the cooking troughs were built and heated. By his account, getting your fulachta fia to boil could be a hot and tiring job but once the lamb or deer meat was in the hot water, thirty minutes to the pound and thirty minutes extra was the best recipe for delicious pot-roast.

The participants in previous Field Meetings will know how expertly Pete Coxon can create big dynamic scenarios in which ice sheets grind, slide and polish rocks on their way to the sea. This year was no exception. I remember descriptions of the Late Pleistocene dramas played off the coast of north Mayo from a field meeting a couple of years ago. When this is added to the new geomorphological details we were shown on the island, the west coast must have taken quite some punishment over 10,000 years ago.

Clare Island at the end of the last Ice Age had a much more dramatic landscape than today. Now, many of the big rocky features have been made bland and smooth by layers of peat. Using the preserved pollen in these same peats and lake deposits, Michael O'Connell and Gerry Doyle have expanded our understanding of the vegetational history of the island. We were shown deep lake muds containing bits of hazel shells and hefty pine stumps all at least four thousand years old. Pollen diagrams were explained and those from Inishbofin put into their wider context in a lecture given by Michael. Indeed that was the nearest we got to Inishbofin. Unfortunately, due to transport difficulties, our excursion to the smaller island was cancelled.

Clare Island is a wonderful place. We spent two happy days walking over beautiful country with companions who had developed the art of mixing their favourite science with that most Irish of pleasures, a good conversation.

Many thanks Pete and Michael and all who made our stay so pleasant and stimulating. It was a great week-end.

Valerie and George Hall.

FORTHCOMING MEETINGS

IQUA Annual Symposium - Friday 25th November 1994

The annual symposium will be held at the Geological Survey of Ireland, Haddington Road, Dublin, and will start at 09.45 hrs. The theme of the meeting is **Sea-level Changes and the Coastal Environment** and has been organised by Cathy Delaney. Admission is free. The programme will include the following speakers/topics:

Prof. John Pethick (University of Hull) - Estuarine management in areas of sea-level rise.

Prof. Michael Tooley (University of Durham) - Title to be announced.

Prof. Julian Orford (Queen's University, Belfast) - A conceptual approach to the controls on the life term of gravel-dominated barriers along the Nova Scotian Atlantic coast.

Prof. Andrew Brock (University College, Galway) - Eustasy, isostasy and tectonics: aspects of sea-level change.

Prof. Peter Woodman (University College, Cork) - Ferriters Cove, an early prehistoric coastal settlement in southwest Ireland.

Dr. Mark Duffy (University of Reading) - Title to be announced.

Dr. Michael Healy (Manchester Metropolitan University) - Heavy mineral contamination in estuaries in west Cornwall.

Dr. Imogen Crawford (University of Lancaster) - Application of archaeology in dating coastal processes - evidence from the Aird a 'Bhorrain peninsula, North Uist.

Dr. Kieran Hickey (St. Patrick's College, Maynooth) - Historical documentation of sand mobility in Scotland.

Dr. Peter Wilson (University of Ulster, Coleraine) - Chronology and evolution of coastal dunes near Dunfanaghy, Donegal.

Sr. Gonzalo Malvarez & Dr. John McCloskey (University of Ulster, Coleraine) - Numerical modelling for energy distribution on the nearshore: the importance of input data quality.

Mr. Philippe MacClenahan (University of Ulster, Coleraine) - The recording and interpretation of Holocene coastal dune chronostratigraphy in Ireland: an assessment of published field data and of its use in palaeoenvironmental reconstruction.

Ms. Anne Sinnott (University College, Cork) - Title to be announced.

NEW POSTGRADUATE STUDENTS IN QUATERNARY RESEARCH

University of Ulster at Coleraine

Brian Sutton - Glacial and periglacial geomorphology of the Mourne Mountains and surrounding area, Co. Down.

Queen's University, Belfast

Eileen Murphy - Physical, anthropological and chemical aspects of archaeological human remains from Eastern Europe.

Trinity College, Dublin

Tom Cooney - Ecological impacts of Late Neolithic copper mining in Killarney.

RECENT PUBLICATIONS ON QUATERNARY RESEARCH IN IRELAND

ANDRIEU, V., HUANG, C.C., O'CONNELL, M. & PAUS, A. 1993. Lateglacial vegetation and environment in Ireland: first results from four western sites. *Quaternary Science Reviews* 12, 681-705.

CARTER, R.W.G. 1993. Age, origin and significance of the raised gravel barrier at Church Bay, Rathlin Island, Co. Antrim. *Irish Geography* 26, 141-146.

DARDIS, G.F. & HANVEY, P.M. 1994. Sedimentation in a drumlin lee-side subglacial wave cavity, northwest Ireland. *Sedimentary Geology* 91, 97-114.

DARDIS, G.F., HANVEY, P.M. & COXON, P. 1994. Late-glacial resedimentation of drumlin till facies in Ireland. In: Warren, W.P. & Croot, D.G. (eds.), *Formation and deformation of glacial deposits*. Balkema, Rotterdam, 127-137.

FOSSITT, J.A. 1994. Late-glacial and Holocene vegetation history of western Donegal, Ireland. *Biology and Environment: Proceedings of the Royal Irish Academy* 94B, 1-31.

HALL, V. A. 1994. Landscape development in northeast Ireland over the last half millennium. *Review of Palaeobotany and Palynology* 82, 75-82.

McCABE, A.M. & DARDIS, G. F. 1994. Glaciotectonically induced water-throughflow structures in a Late Pleistocene drumlin, Kanrawer, County Galway, western Ireland. *Sedimentary Geology* 91, 173-190.

McCABE, A.M. & Ó COFAIGH, C. 1994. Sedimentation in a subglacial lake, Enniskerry, eastern Ireland. *Sedimentary Geology* 91, 57-95.

MITCHELL, F. 1994. *Where has Ireland come from?* Country House, Dublin.

O'CONNELL, M. 1994. *Connemara: vegetation and land use since the last ice age*. Office of Public Works.

O'CONNELL, M. 1994. Ireland. In: Frenzel, B., Anderson, S.T., Berglund, B.E. & Gläser, B. (eds), *Evaluation of land surfaces cleared from forests in the Roman Iron Age and the time of migrating germanic tribes based on regional pollen diagrams*, Special Issue: ESF Project, European Palaeoclimate and Man 7, Gustav Fischer Verlag, Stuttgart.

VAN DER MEER, J.J.M., VERBERS, A.L.L.M. & WARREN, W.P. 1994. The micromorphological character of the Ballycroneen Formation (Irish Sea Till): a first assessment. In: Warren, W.P. & Croot, D.G. (eds.), *Formation and deformation of glacial deposits*. Balkema, Rotterdam, 39-49.

WALKER, M.J.C., BOHNCKE, S.J.P., COOPE, G.R., O'CONNELL, M., USINGER, H. & VERBRUGGEN, C. 1994. The Devensian/Weichselian Late-glacial in

northwest Europe (Ireland, Britain, north Belgium, The Netherlands, northwest Germany). *Journal of Quaternary Science* 9, 109-118.

WARREN, W.P. 1992. Drumlin orientation and the pattern of glaciation in Ireland. In: A.M. Robertson, B. Ringberg, U. Miller & L. Brunnberg (eds.), *Glacial morphology and morphological changes*. Sveriges Geologiska Undersökning, Ser. Ca 81: 359-366.

WARREN, W.P. 1993. *Wicklow in the ice age. An introduction and guide to the glacial geology of the Wicklow district*. Geological Survey of Ireland.

WARREN, W.P. & ASHLEY, G.M. 1994. Origins of ice-contact stratified ridges (eskers) of Ireland. *Journal of Sedimentary Research* A64, 433-449.

LEAVES WANTED

I am looking for leaves (tree or herbaceous plant) preserved in reasonable condition in Postglacial, Lateglacial or earlier sediments, archaeological sites, old herbarium sheets, or good impressions of them in tufa deposits within Ireland. They are required for a Forbairt funded project which we will be starting in TCD this October. Stomatal density and stable carbon isotopes will be measured from the leaves to determine the plants' physiological responses to past atmospheric conditions. If you know of any suitable material please contact me at the address below. We intend to obtain AMS dates for the leaves and so this may be an opportunity for you to get your favourite sediment dated.

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