



# IRISH ASSOCIATION FOR QUATERNARY STUDIES

## IQUA NEWSLETTER

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Edited by Ronnie Creighton

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### Introduction

This edition of the Newsletter contains a variety of items including the Abstracts from the seminar at the A.G.M. in March, 1991. As always I renew my appeal for contributions to the Newsletter.

Ronnie Creighton

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### Holocene Climatic Changes and Human Settlement in the Xian Region of China

The Holocene environmental history of the Xian region in north-west China, where eight of the ancient Chinese capital cities were built, will be discussed. The typical Holocene formation consists of three couplets of aeolian loesses and soils in the valley. Thousands of settlement remains from the Neolithic period are found within the area.

The studies on the loesses and soils show three cycles of climatic change in the Holocene, i.e. 10,500-6,800 B.P., 6,800-3,100 B.P., and 3,100 B.P. to the present time. The first half of each cycle is a cold-dry period when aeolian loess accumulated, while the second half is warm-humid and forest soils developed. The distribution of settlement, including villages, towns, cities and regal graveyards as well as capital cities, shows a remarkable response to climatic and environmental changes. In the cold-dry periods, i.e. Mesolithic, middle Neolithic, late Bronze and Iron Ages, people moved to lowlands near rivers for farming and water supplies. In the warm-humid periods, i.e. early Neolithic, late Neolithic and early Bronze Ages, and past A.D. 580, settlement was in the uplands to avoid floods. During these periods, farming was also concentrated in the uplands.

Huang Chun Chang, Dept. of Botany, University College Galway.

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### The Morphological Evolution of the Long Strand Sand Dunes

The Irish coastline is 3,200 km long. This includes a total of about 1,000 km. of dunes of various types, ranging from large accumulations of sediments to ridge-top veneers. Very few of these dunes have had detailed research applied to them. Carter and Wilson have carried out considerable work at Magilligan Foreland. Some work has been carried out on the dunes on the east coast, focusing mainly on ecology and management. To date no detailed work has been pursued on the south coast.

Long Strand lies west of Galley Head in Rosscarbery Bay, Co. Cork. The foreshore beach is 1,940m long. There is a very well defined sand dune system

in place at the near of the beach, covering an area of 28.5ha. The dunes are heavily vegetated and therefore appear to be stable. It has been suggested that they are a relatively recent feature of this area, resulting from a period or periods of high storm activity. Kilkeran lake is a "lagoon" which lies behind the dunes and is connected to the sea by a river channel which is periodically closed.

This paper is an introduction to Long Strand sand dune complex and its environs. It briefly examines the processes at work in maintaining dune stability. As part of an M.A. thesis a detailed morphological map of the dunes is being compiled. Later work will include the analysis of sand particle size and type in an effort to ascertain whether dune sands contain structural features which may reveal something of accumulation characteristics. The methods to be used in this work will be discussed.

**Mary Foley, Geography Dept., University College, Cork.**

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### **A Remote Archaeological Survey of County Mayo**

A largely remote archaeological survey of County Mayo presently underway is part of a nationwide campaign of archaeological mapping by the Office of Public Works.

The survey is based largely on cartographic, documentary and aerial photographic research augmented by material supplied by over fifteen amateur and professional archaeologists working on the county.

Some early results include the discovery of hundreds of Bronze Age monuments particularly fulachta fiadh and standing stones - revolutionizing our knowledge of Bronze Age settlement. Detailed local studies of Inishkeen, Achill and Clare Islands are turning up significant new prehistoric and early Christian material. Extensive relict landscapes similar to those in the Burren are being discovered and mapped in the karstlands of south Mayo. A site type new to Irish archaeology, the lake promontary fort has been identified on the major lakes - Con, Carra and Feeagh and important new evidence for major Norman settlements in the county have been discovered mirroring similar discoveries in Sligo.

**Michael Gibbons, Director Mayo Archaeological Survey.**

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### **The Third European Dune Congress, Galway, 17-21st June, 1991**

The Third European Dune Congress will be hosted by the European Union of Dune Conservation and Coastal Management at University College, Galway on 17th-21st June, 1991.

The congress, entitled "Ecology, Geomorphology and Management for Conservation will bring together not only scientists of all disciplines but local planners, coastal managers and wildlife rangers. The objective is to bring together people with varied scientific knowledge together with people who have practical experience in managing and conserving coastal dune ecosystems. There will be several sessions on for example Ecological Studies, Geomorphology and Soils, Management and conservation. It is hoped to promote an informal atmosphere and hold smaller workshops to facilitate interactive discussions between the delegates. Responses have been mostly from Europe, but also from as far afield as Hungary, Australia and the United States.

Registration with a IR£40 deposit should be by March 31st and more details are available from:

Dr. Tom Curtis, Wildlife Services, Sidmonton Place, Co. Wicklow.  
Phone: (01) - 867751 Fax: (01) - 868126

Dr. Micheline Sheehy Skeffington, Dept. of Botany, University College Galway.

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### Some Recent Publications on Quaternary Research in Ireland

- WILSON, P., 1990. Morphology, sedimentological characteristics and origin of a fossil rock glacier on Muckish Mountain, northwest Ireland. Geografiska Annaler, 72A, 237-247.
- O'CONNELL, M., 1990. Early land use in north-east Co. Mayo. - The palaeoecological evidence. Proc. R. Ir. Acad., 40C, 259-279.
- O'CONNELL, M., 1990. Origins of Irish lowland bogs in Doyle, G.J. (ed.) Ecology and Conservation of Irish peatland, 49-71. Royal Irish Academy.
- WARREN, W.P., 1990. Deltaic deposits in the Carey Valley, Co. Antrim, Ireland. Sedimentary Geology, 69, 157-160.
- MCCABE, A.M. and EYLES, N., 1990. Deltaic deposits in the Carey Valley, Co. Antrim, Ireland - reply to comments by W.P. Warren. Sedimentary Geology, 69, 161-162.
- MOLLOY, K. and O'CONNELL, M. 1991. Palaeoecological investigations towards the reconstruction of woodland and land-use history at Lough Sheeauns, Connemara, western Ireland. Review of Paleobotany and palynology, 67, 75-113.

Peter Wilson, Dept. of Environmental Sciences, University of Ulster, Coleraine.

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### IQUA November Symposium, 1991

The annual IQUA Symposium will be held on Friday, 29th November, 1991 at the Geological Survey of Ireland. The provisional title for the meeting is:-

"The Post-Glacial Period: Fresh Perspectives".

Further details are available from Michael O'Connell, Peter Wilson and Valerie Hall.

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### IQUA Committee 1991/92

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### Subscription Reminder

IQUA subscriptions for 1991 are now overdue. You are requested to forward your subscription:- £5 - ordinary member; £3 - student and unwaged to the

Treasurer, Barbara Miller, Dept. of Geography, U.C.D., Belfield, Dublin 4. Also please notify the Secretary of any change of address etc.

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### **IQUA Annual Field Trip**

The 1991 Annual Field Trip will be to West Mayo on the usual weekend at the beginning of October. The trip is being organised by Peter Coxon of the Geography Dept., T.C.D. The trip will examine various aspects of Quaternary geology, palaeobotany, archaeology etc. of the region and promises to be a very interesting trip. Further details will be issued later or available from Peter Coxon.

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