obituary

Eric Higgs, who died in Cambridge on September 23 after a long illness, will be remembered especially for his contribution to economic prehistory over the past decade. He became an archaeologist at a time of life when most think only of retirement, after a first career as an economist and a second as a hill farmer. The impact that he made in his third career, as a research and teaching archaeologist at Cambridge University, is all the more remarkable for the fact that his health was poor—intermittently at first, but increasingly so with time.

He found prehistoric archaeology dominated by the belief that the key to understanding early man rested in the study of his artefacts and of the cultural groupings based on artefactual styles: the relationships between the prehistoric cultures were the cornerstone of the subject, largely divorced from the natural environment, and the ordinary economic life of prehistoric communities had been relegated by most prehistorians to a comparatively minor role in the history of early man. The study of prehistoric subsistence consisted of what he termed a 'horrid porridge' of specialist reports which, although embodying a considerable degree of technical competence in the analysis of biological data, usually did little to build an integrated picture of man's relationship with his environment. To Higgs, the emphasis on the importance of cultural data was fundamentally misleading, in that it obscured basic economic motives, such as the need for food, which were and are the vital core of human behaviour. By assigning subsistence to a central place in prehistoric archaeology, he did much to establish economic prehistory as an independent discipline based on its own concepts and supported by its own laboratory and field techniques.

These interests crystallised during his fieldwork in Greece (Epirus) in the

middle and late sixties. In 1967 he was appointed director of a British Academy Major Research Project to study the origins and early history of agriculture. From then until his death he presided over a hectic decade of original and fundamental research and fieldwork, in areas as diverse as Alaska and Israel, on periods as widely separated as the Middle Palaeolithic and the Mediaeval.

This research was important in two ways: a theoretical contribution to the study of prehistoric subsistence in general and early agriculture in particular, and methodological developments in fieldwork. His project undertook a long overdue reassessment of the basic concept of animal and plant domestication. He argued that it was unrealistic to expect that human subsistence in prehistory would divide neatly into hunting and farming; instead, there would have been a series of relationships between prehistoric men and their plant and animal resources. Prehistorians have yet to appreciate fully the implications of this reassessment, for they have yet to accept that when and where agriculture originated cannot be confined to a convenient postglacial Garden of Eden: or that its origins had better be re-defined on more sensitive and complex criteria.

Of the new techniques he introduced, some, such as froth flotation for retrieving botanical remains from habitation sites, or site catchment analysis for quantifying economic potential of the areas exploited from prehistoric settlements, were culled from other disciplines, and modified; others, such as sieving techniques for recovering faunal samples, were already in occasional use but have since become an integral feature of modern palaeoeconomic investigations. This fieldwork, embodied in two major publications—*Papers in Economic Pre-history* and

Palaeoeconomy—was conducted and published within five years and was usually undertaken on field budgets which would have confined many another expedition to the armchair. Higgs even made his students pay 5 shillings a day for the privilege of working 8-h on-off shifts (under floodlights if necessary) at the site. (Hammond Innes did his fieldwork for the novel *Lefkas Man* by watching Higgs in action in Greece.)

Inevitably, his research aroused much debate and criticism. Many of his colleagues felt uneasy about his conviction that prehistoric archaeology had hitherto been concerned with only trivial aspects of past human behaviour and few shared his sublime indifference to the vagaries of ceramic and lithic styles. Yet the simplicity of Higgs's viewpoint was its strength, for it provided a direct challenge to an ageing conceptual framework which had denied the biological basis of prehistoric human behaviour. As Higgs said, "did Man Make Himself and control his own destiny as Childe had taught, or did he, like Topsy, just grow?"

Those who knew him personally, could not fail to recognise him as a man of remarkable character. He was an utter individualist, with scant regard for convention in either his professional or his personal life. It was in keeping with the man that he merged both, and shared them with his students to a remarkable degree; in return he expected and generally received a degree of commitment that often surprised even those who gave it. Eric Higgs was a remarkable man, in particular a gifted and riveting teacher. Prehistoric studies in general, as well as the personal and professional lives of those who knew him, are much the poorer for his death.

Graeme Barker
Robin Dennell

Benjamin Franklin Howell, Professor Emeritus of Geology and Palaeontology, at Princeton University, died on May 28 at the age of 85.

Howell was born on September 30, 1890, in Troy Hills, New Jersey. At the age of 18 he entered Princeton University where he received his Bachelor's degree in 1913, a Master's degree in 1915, and a Doctor of Philosophy degree in 1920, all in the Department

of Geology. He remained at Princeton where he was appointed as Assistant Professor in 1920 and became Professor of Geology and Palaeontology in 1947. He also served as Curator of Palaeontology and Stratigraphy at Princeton from 1924 until his retirement in 1959.

In addition to his work at Princeton, Howell was engaged in adult education as Professor of Geology at the Wagner

Free Institute of Science in Philadelphia, Pennsylvania, from 1928 to 1947. He also served as part-time Curator of Palaeontology at the Academy of Natural Sciences in Philadelphia from 1937 to 1947 and as a Visiting Lecturer in Palaeontology at the University of Pennsylvania.

He was a recognised authority on the palaeontology of the Cambrian Period, the earliest geological period of abun-

dant marine invertebrates. He was one of the founders of the International Palaeontological Union, and served as its Secretary in 1936-1937 and as its Vice-President in 1938. He was also an Honorary Member of the Geological Society of London as well as of the Palaeontological Society of India. At various times he had served as a consultant for the United States Geological Survey, the United States National Museum, the Geological Survey of Canada, the Canadian National

Museum, and the geological surveys of Vermont and Montana.

In America Howell was an active member and officer in both palaeontological and geological societies: as a Fellow of the Palaeontological Society he served as its Secretary from 1931 until 1939 and as President in 1944, and was a member of several of its committees concerned with Cambrian fossils and stratigraphy. As a Fellow of the Geological Society of America he was elected Vice-President in 1945.

During the early 1950s he was Chairman of the Cambrian section of the National Research Council's Committee on Stratigraphy.

During his long career Howell was one of the more prolific writers in the geological profession. His bibliography includes more than 200 titles of geological and palaeontological contributions, dealing mainly with Cambrian marine invertebrates, especially trilobites.

Erling Dorf

announcements

Appointments

Dr Barrie Vernon-Roberts as Professor of Pathology at the University of Adelaide.

Mr A. R. Haly as chief of CSIRO Division of Textile Physics.

Dr D. G. Murchison to a Chair of Organic Petrology at the University of Newcastle upon Tyne.

Professor J. Heslop-Harrison as a Royal Society Research Professor, to be taken up at the University of Wales, Aberystwyth.

Professor G. W. Kenner as a Royal Society Professor at the University of Liverpool.

Professor J. L. Gowans of the University of Oxford will take over as the new secretary of the MRC in April.

Meetings

November 17, **Cumulonimbus Convection**, London (T. M. R. Whitwell, James Glaisher House, Grenville Place, Bracknell, Berkshire RG12 1BX, UK).

January 3-5, **Mathematical Aspects of Homogeneous and Heterogeneous Combustion**, Cranfield Institute of Technology, Bedford (The Secretary, The Institute of Mathematics and its Applications, Maitland House, Warrior Square, Southend-on-Sea, Essex, UK).

January 6-7, **Respiratory Gas Transport**, London (The Secretary, The Institute of Mathematics and its Applications, Maitland House, Warrior Square, Southend-on-Sea, Essex, UK).

January 17-22, **Gondwana**, Calcutta (Organising Committee, IV International Gondwana Symposium, The Geological Survey of India, 27, Jawaharlal Nehru Road, Calcutta-700016, India).

January 31-February 2, **Cadmium**, San Francisco (The Cadmium Association, 34 Berkeley Square, London W1X 6AJ, UK).

February 7-8 (Chicago) and February 14-15 (Brussels), **Laboratory Testing**

Person to Person

Applications for the Victor Heiser Awards for Leprosy Research are invited to apply to Ms Caroline R. Stanwood, Director, Heiser Fellowship Program for Research in Leprosy, 1230 York Avenue, New York, New York 10021. The awards are for: Postdoctoral Research Fellowships, \$10,000-14,000, applications from individuals or heads of departments, Visiting Research Awards (for specific research at distant institutions), Research Grants (possibly available for specific programmes).

Wanted: 3- or 4-bedroom furnished house in central London, preferably Ealing, from August 1, 1977 to July 30, 1978, in exchange for house in Halifax. Replies to Carl Abbott, M.D., Department of Medicine, Camp Hill Hospital, Halifax, Nova Scotia, Canada B3H 3G2.

M.I.T. professor offers a 12-room fully furnished Victorian home in Brookline, Mass., in exchange for a 7-room (minimum) home within reasonable commuting distance of central London for one year beginning July 1, 1977. Brookline is very near Harvard, M.I.T., and major hospitals; has excellent schools and public transportation. Please reply to Dr Harvey Lodish, M.I.T. 16-435, Cambridge, Mass., 02139.

for Cancer (Robert S. First, Inc., 405 Lexington Avenue, New York, New York 10017).

March 23-25, **Nuclear Physics**, Guildford (The Meetings Officer, The Institute of Physics, 47 Belgrave Square, London SW1X 8QX, UK).

April 4-7, **Atomic and Molecular Physics**, Reading (K. Codling, Conference Secretary, J. J. Thomson Physical Laboratory, Whiteknights, Reading RG6 2AF, UK).

April 4-7, **Low Temperature Biological Microscopy**, Cambridge (Dr P. Echlin, The Botany School, University of Cambridge CB2 3EA, UK).

May 8-12, **Psychoneuroendocrinology**, Atlanta (Dr Richard P. Michael, Department of Psychiatry, Emory University School of Medicine, Atlanta, Georgia 30322).

July 13-15, **Processing, Structure, Properties and Performance of Polymers**, Nottingham (The Meetings Officer, The Institute of Physics, 47 Belgrave Square, London SW1X 8QX, UK).

July 24-30, **Optimal Development and Management of Groundwater**, Birmingham (Dr J. W. Lloyd, Organising Secretary, IAH Symposium, Department of Geological Sciences, University of Birmingham, PO Box 363, Birmingham B15 2TT, UK).

August 22-24, **Scientific Instruments: Their Social and Economic Settings**, Greenwich (Organising Secretary, Department of Navigation and Astronomy, National Maritime Museum, Greenwich, London SE10 9NF, UK).

September 4-8, **Low Energy Ion Beams**, Salford (The Meetings Officer, The Institute of Physics, 47, Belgrave Square, London SW1X 8QX, UK).

September 19-24, **Behavioural Development**, Pavia, Italy (Secretary to the 4th Biennial Congress of the International Society for the Study of Behavioural Development, The Institute of Psychology of the Faculty of Letters and Philosophy of the University, Corso Strada Nuova, 65, 27100-Pavia, Italy).