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Hallam L. Movius

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THE IRISH STONE AGE

ITS CHRONOLOGY,
DEVELOPMENT & RELATIONSHIPS

by

HALLAM L. MOVIUS, JR., PH.D.

*Assistant Curator of Palaeolithic Archaeology,
Peabody Museum, Harvard University*



CAMBRIDGE
AT THE UNIVERSITY PRESS
1942

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CAMBRIDGE UNIVERSITY PRESS
Cambridge, New York, Melbourne, Madrid, Cape Town,
Singapore, São Paulo, Delhi, Mexico City

Cambridge University Press
The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org
Information on this title: www.cambridge.org/9781107693005

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First published 1942
First paperback edition 2013

A catalogue record for this publication is available from the British Library

ISBN 978-1-107-69300-5 Paperback

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To

EARNEST ALBERT HOOTON

an able teacher and a loyal friend
who created the Harvard Irish Survey
and whose inspiration and guidance
led to the writing of this book

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FOREWORD

The participation of Harvard University in Irish archaeology came about as the result of a five-year research programme inaugurated and directed by Professor E.A. Hooton, Chairman of the Division of Anthropology at Harvard. This project, known as the Harvard Irish Survey, dealt with the physical anthropology, sociology and archaeology of Ireland.

The work in physical anthropology was directed by Professor Hooton and the work in the field was conducted by Dr C. Wesley Dupertuis, now of the Presbyterian Hospital, New York. Some 10,125 adult male individuals were measured, and the results of this study are now being prepared for publication by Professor Hooton. The sociological survey was initiated by Professor W. Lloyd Warner, now of Chicago University, and was carried on by Professor Conrad M. Arensberg, now of Brooklyn College. The work of the sociologists, concentrated in County Clare on the west coast, has been published in two books, *The Irish Countryman* by Professor Arensberg (Macmillan & Co., New York, 1937) and *Family and Community in Ireland* by Professor Arensberg and Dr Solon T. Kimball (Harvard University Press, 1940).

The archaeological field-work was carried out by the Harvard Archaeological Expedition to Ireland from 1932 to 1936. Its work was conducted with the generous financial assistance of the governments of Eire and Northern Ireland, and with grants from the American Council of Learned Societies, the American Philosophical Society, the Milton Fund and the Division of Anthropology at Harvard University, as well as by numerous private subscriptions. Fifteen sites were fully excavated, covering nearly every cultural phase from the beginning of the Irish Stone Age to the eleventh century A.D. The site reports are being published by the Royal Irish Academy and the Royal Society of Antiquaries of Ireland, and at the present time all but two have appeared or are in the press. The material excavated in Eire is deposited in the National Museum of Ireland and that from Northern Ireland will be returned when possible to the Belfast Municipal Museum and Art Gallery. These two museums and their staffs generously provided every facility to the Expedition for work and study.

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The activities of the Expedition were divided into two parts, one dealing with the Stone Age and the other with the later periods. The Stone Age excavations were in charge of the Assistant Director of the Expedition, Dr H. L. Movius, Jr., who is also Assistant Curator of Palaeolithic Archaeology in the Peabody Museum of Harvard University. The present volume embodies a consideration of Late-Glacial and Early Post-Glacial chronology in Ireland, Great Britain and Scandinavia, a study of the natural environment of Stone Age man in Ireland, and a comprehensive treatment of the results of six excavations conducted there by Dr Movius.

H. O'NEILL HENCKEN

*Director of the Harvard Archaeological
Expedition to Ireland*

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As stated in the foreword the principal aim of the Harvard Irish Survey was to embody in the field three of the techniques of modern anthropology—physical anthropology, social anthropology and archaeology—directed towards research on the same problem: *the origin and development of the races and cultures of Ireland*. One particular aspect of the archaeological work, the scope and general character of which will be summarized in the introduction, is included in this book; the original version was presented in partial fulfilment of the requirements for the degree of Doctor of Philosophy at Harvard University in May 1937. Here I shall take the opportunity of thanking the scholars of several countries whose learning and generous assistance in many ways have made this work possible.

At the outset I wish to express my gratitude to Dr H. O'Neill Hencken, Director of the Harvard Archaeological Expedition to Ireland. Dr Hencken's helpful advice, close co-operation and friendship during the entire programme are reflected in a large measure by the degree of success achieved. A total of six Stone Age sites was investigated by the Expedition, five of them in Northern Ireland. During the 1934 season excavations were conducted at Kilgreany Cave, County Waterford (*Four. Roy. Soc. Ant. Ireland*, LXV (1935), 254–296); Newferry, County Londonderry (*Proc. Roy. Irish Acad.* XLIII (1936), 17–40); Glenarm, County Antrim (*Four. Roy. Soc. Ant. Ireland*, LXVII (1937), 181–220); and Cushendun, County Antrim (*Proc. Roy. Irish Acad.* XLVI (1940), 1–84). In 1935 an excavation was made at Curran Point, Larne, County Antrim, and it is hoped that the report covering this work will be published in 1942. A site on Rough Island, in Strangford Lough, County Down (*Four. Roy. Soc. Ant. Ireland*, LXX (1940), 111–142), was investigated in 1936 to complete the field-work. In Eire the Expedition has worked in close conjunction with the National Museum, of which Dr Adolf Mahr, M.R.I.A., is Director, and with the Ancient Monuments Committee, with H.G. Leask, M.R.I.A., as Chairman. Mr Anthony Farrington, Secretary of the Royal Irish Academy, and Justice Liam Price, M.R.I.A., Editor of the *Journal of the Society of Antiquaries of Ireland*, have given much helpful advice. Professor R.A.S. Macalister, M.R.I.A., of the

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National University, and Dr R. Lloyd Praeger, M.R.I.A., have likewise helped in many ways. In Northern Ireland, where the majority of the Stone Age sites are located, the Ancient Monuments Advisory Committee, of which the late Very Reverend Dean Carmody, M.R.I.A., was the former Chairman, and Dr D.A. Chart, I.S.O., M.R.I.A., Vice-Chairman, readily gave us permission to excavate and helped in every way to facilitate the work. Likewise the Belfast Municipal Museum and Art Gallery, Mr Arthur Dean, M.R.I.A., Curator, and Mr J.A.S. Stendall, M.R.I.A., Deputy Curator, has extended many courtesies. Professor J.K. Charlesworth, M.R.I.A., of Queen's University, whose important geological papers are frequently referred to in this book, has offered many helpful suggestions.

In the actual field-work I have been assisted by Messrs Amory Goddard of Sharon, Massachusetts, F.T. Riley of Dublin, and F.L.W. Richardson, Jr., of Harvard University, all in 1934; in 1935 at Larne, Miss Dorothy Newton, formerly of the Peabody Museum at Harvard, and my wife ably helped with the management of the digging; while during the 1936 season, Mr J. Raftery of the National Museum, Dublin, assisted in supervising the Rough Island excavation. Although not a member of the staff, Mrs Nora Fisher McMillan, Free Public Museums, Liverpool, has carried out the important work of identifying the marine fauna. Professor Glover Allen of Harvard University, Mr A.W. Stelfox, M.R.I.A., of the Natural History Division of the National Museum, Dublin, and Dr J. Wilfred Jackson of the Manchester Museum, have examined and identified the animal and fish bones, and the important task of identifying the charcoal was done by Mr J. Cecil Maby, F.R.A.S. Professor V. Gordon Childe of Edinburgh University reported on the pottery recovered at Newferry; in 1934 several very pleasant days were spent with Professor Childe while in Scotland on a survey of Mesolithic sites and collections.

In 1934 a Committee for Quaternary Research was formed in Ireland, and the Danish geologist and palaeobotanist, Professor Knud Jessen, Director of the Botanical Gardens, Copenhagen, came to Ireland for two consecutive years to conduct research on the Irish bogs. Both Professor Jessen and his assistant Dr H. Jonassen visited all the sites containing polleniferous deposits excavated in Northern Ireland, and their reports on the pollen analyses are summarized in the text. Dr Jessen's extensive background concerning Early Post-Glacial deposits in the Baltic, acquired

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while he was a member of the Danish Geological Survey, has made the geological interpretation of the sites far clearer. I visited Denmark in 1934 and was shown many important Litorina deposits around Roskilde Fjord in the Island of Zealand by Professor Jessen, as well as several Mesolithic stations. Since the geological situation in Ireland closely parallels that of the Baltic region, this experience has proved invaluable. At the National Museum, Copenhagen, Dr Therkel Mathiassen placed at my disposal the rich collections from the Mesolithic sites in Denmark, and thereby I have obtained a clearer impression of this material at first hand than I could ever have had otherwise. In 1932 Dr G. Schwantes and Professor H. Obermaier visited Ireland, where they examined several important collections, and they both made valuable suggestions concerning the Irish Stone Age at that time, as well as subsequently by correspondence. In England some of the excavated material was examined by Professor D.A.E. Garrod and Mr Miles Burkitt, F.S.A., both of whom have offered helpful remarks. The book itself, however, was inspired by Dr J.G.D. Clark's recent work—*The Mesolithic Settlement of Northern Europe* (Cambridge University Press, 1936). Its writer, who is an accepted authority on the Mesolithic, critically read my Part II in manuscript and offered many very practical comments on the subject-matter dealt with. Throughout I have endeavoured to base the method of presenting my material on the admirably full and concise way in which he has treated his. While still in manuscript form, Part I was read by Professor P.G.H. Boswell, F.R.S., of the Imperial College of Science and Technology, London; Dr H. Godwin of the Botany School, Cambridge, England; and Dr F.E. Zeuner of the British Museum of Natural History. I am most profoundly indebted to these scholars for their many helpful suggestions and much in the way of constructive criticism with regard to my handling of various problems. Throughout, both Dr Hencken and my wife have helped me in innumerable ways with the actual organization of the text and with making my presentation of it clear and correctly expressed. Others who have offered valuable comments include: Professor H. Breuil of Paris; Mr J.P.T. Burchell, F.S.A., of London; Mr C.F.C. Hawkes, F.S.A., Assistant Keeper of British Antiquities, British Museum; Mr A.D. Lacaille, F.S.A., of London; Dr W.J. McCallien of Glasgow University; and Dr R.E.M. Wheeler, F.S.A., Keeper of the London Museum.

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PREFACE

No small share of the credit for the accomplishments achieved during my three seasons of field-work on the Irish Stone Age sites is due to the co-operation of Mr C. Blake Whelan, M.R.I.A., of Belfast. Since the beginning of the century interest in Irish Prehistory had declined; nevertheless, as a result of Mr Whelan's efforts, it was again revived in 1930. In 1933 two enjoyable weeks were spent with him surveying the coasts of Counties Antrim and Down, as well as visiting the inland sites of Lough Neagh and the Lower Bann Valley. At this time plans for the future were made, as Mr Whelan willingly placed all his sites at the disposal of the Expedition for consideration. In addition, a small Neolithic station on Rathlin Island, County Antrim, was dug in 1934 as part of the programme (Whelan, C. B., *Proc. Roy. Irish Acad.* XLII [1934], 121-143). It has been largely Mr Whelan's unselfish attitude that has led to the successful results of many of the excavations.

It is difficult for me adequately to express my gratitude to my professors at Harvard. To some degree I count all whose names appear above as my teachers, but it is to the Division of Anthropology, including Professors E. A. Hooton (Chairman), Mr A. M. Tozzer, and the late Mr R. B. Dixon, as well as Professor K. Bryan of the Department of Geology, that I owe my basic training. Also I wish to thank Dr V. J. Fewkes of the University of Pennsylvania, and Dr T. D. McCown of the University of California, under whose direction I did my first work in the field of Old World archaeology—both in Central Europe and the Near East—before joining Dr Hencken in Ireland. Although not one of my teachers, I must mention Mr Donald Scott, Director of the Peabody Museum of Harvard University, whose generous support and sympathetic understanding made it possible for me to rewrite this book from the form in which it was originally submitted as a thesis. Of the others who have assisted in many ways, and among whom I include the tutors and lecturers in the Department of Anthropology, as well as the staff of the Peabody Museum, I should like to refer again to Dr Hencken. The five seasons spent with him in Ireland were among the most enjoyable and interesting of my life, and the experience gained from contact with him will always be remembered.

I am profoundly grateful to the following authors, who have very kindly given me permission to make use of illustrations from their publications:

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PREFACE

Professor H. Breuil; Mr J. P. T. Burchell, F.S.A.; Professor V. Gordon Childe, F.S.A.; Dr J. G. D. Clark, F.S.A.; Professor R. A. Daly; Dr H. Godwin; Mr C. F. C. Hawkes, F.S.A.; Professor K. Jessen; Mr A. D. Lacaille, F.S.A.; Mr J. Reid Moir, F.R.S.; Dr R. Lloyd Praeger, M.R.I.A.; and Mr C. Blake Whelan, M.R.I.A. I am likewise indebted to the courtesy of the following publishers and learned societies for their permissions, in all cases readily granted, to reproduce illustrations: the Council of the Royal Irish Academy, the Council of the Royal Society of Antiquaries of Ireland, the Editor of *The Irish Naturalists' Journal*, the Council of the Society of Antiquaries of Scotland, the Council of the Royal Society of London, the Society of Antiquaries of London, the Executive Committee of the Royal Anthropological Institute of Great Britain and Ireland, the Editor of *The Archaeological Journal*, the Editors of *The New Phytologist*, the Executive Committee of the Prehistoric Society (formerly the Prehistoric Society of East Anglia), the Cambridge University Press, Macmillan & Co., Ltd., London, and the Yale University Press. As a result of the war, permission to reproduce the drawings of objects from Le Campigny, shown in Fig. 53, could not be obtained from the Editor of the *Revue Mensuelle de l'École d'Anthropologie de Paris*. Therefore we are proceeding in this matter on the assumption that, were it not for the present chaotic state of world affairs, this permission would have been forthcoming.

It is a pleasure to thank all those who have assisted with the original illustrations included in this book. These represent hours of painstaking work to which the following have contributed: Messrs Elmer Rising of the Peabody Museum, Ferdinand R. Iwasko of Cambridge, Massachusetts, and Robert Bremer of Milton, the Misses Helen Cabot of Jamaica Plain and Mary-Eily de Putron of Terenure, Dublin, as well as my wife. It is to my wife for the drawings of the implements from Cushendun, Rough Island and Larne, and to Messrs Rising and Iwasko for the maps, plans and sections that I am especially indebted.

Finally I should like to acknowledge my gratitude to those who have made the publication of this book financially possible. A substantial share of the cost was very kindly undertaken by the Peabody Museum and the Division of Anthropology of Harvard University, while the balance was most generously contributed partly by my father-in-law, Sir Constantine T.

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Champion de Crespigny of Adelaide, South Australia, and partly by my aunt, Mrs Richard M. Saltonstall of Chestnut Hill, Massachusetts.

With regard to the actual work of printing and publishing this book, I wish in conclusion to express my sincere thanks to the Cambridge University Press for the magnificent manner in which they have carried on with the job in spite of the war. Although several letters and one batch of proofs were lost "due to enemy action", the publication date has only been delayed by several months. This is largely a result of the prompt and understanding manner in which the officials of the University Press have handled numerous difficult situations arising not only from losses of correspondence, but also from working with a reduced staff. I wish to express my thanks to them for their many courtesies and efficient co-operation.

HALLAM L. MOVIUS, JR.

SOUTH SUDBURY,
MASSACHUSETTS, U.S.A.
AUGUST 1941

INTRODUCTION

The primary purpose of this book is to present in a comprehensive manner the results of the writer's research into the problems of the Irish Stone Age. The area is limited to the North-Eastern Irish coast, which witnessed a local development of culture in the Mesolithic Period during Early Post-Glacial times, and includes Counties Antrim and Down westward to the valley of the Lower Bann River. Between the littoral of this region, and the inland valley of Lough Neagh and the Bann, a highland zone occurs, formed by a plateau of Cretaceous chalk overlain by Tertiary basalt, and rising to an average height of 1000 feet above the sea. A ready and almost inexhaustible supply of flint was available in the chalk of this region, which was exploited throughout the Stone Age, and which doubtless was an important factor in attracting settlers.

For the most part the previous attempts to trace the origins and development of the Stone Age cultures of Ireland have been made from a typological point of view; however, it is a commonplace to state that even more important than the typology of a culture is its chronological position and its relation to comparable developments in other regions. Although recent excavations in Counties Antrim and Down have revealed prolific Mesolithic and Neolithic material at several sites, no Palaeolithic remains were discovered. The reason for this is obviously connected with the geological history of the area, and an examination of the published material has disclosed a wealth of disconnected but extremely important data, the clarification of which answers the question of the date of the earliest settlement in Ireland. The results of this investigation are incorporated into Part I of this book, and an attempt has been made to bring the material together with a definite purpose in mind: that of stimulating further work. Future research will doubtless show that some of the geological interpretation is incorrect in detail, nevertheless it is hoped that the data have been presented in a sufficiently comprehensive manner to be of use to other workers. The writer, trained as an archaeologist and approaching the problem from the purely objective viewpoint of an outsider, sees no valid reason for doubting an intimate relationship between Britain and Ireland on the one hand and Northern Europe on the other during Late-Glacial and Early Post-Glacial

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times. With the background of Part I, the problems of the Irish Stone Age are more clearly defined, and the environmental conditions which governed the growth and development of the Early Post-Glacial cultures may be more vividly depicted. Likewise the age of the stratified deposits containing the archaeological material becomes firmly established.

“The last ten years have witnessed an extraordinary increase in the data available to the prehistorian, and a remarkable expansion of the fields he must survey” (Childe, 1936 [6], p. 1). During this period, archaeology has taken on a new function, as Professor Childe clearly points out: that of carrying “natural history forward from the point where geology and palaeontology would leave it”. But, with the exception of the primary rule of stratigraphy, the laws of the natural sciences are far too rigid to provide an adequate interpretation of human culture, which must always be regarded as the product of man in his struggle to adapt himself to his environment, and ultimately to seek the control of it. The fact that this interplay has always existed, everywhere that man has settled, makes it of paramount necessity for the archaeologist to strive for as detailed a reconstruction as possible of the geographical setting of prehistoric cultures. With respect to this concept, ethnology has made many important contributions. The late Professor R. B. Dixon, referring to modern food-gathering peoples, states: “the extent of the dependence of culture on environment and the closeness of the correlation between them is greatest in the lower stages of cultural growth” (1928, p. 31). This applies with equal force to archaeology, which alone is capable of introducing the time-factor and makes it clear that environment, including climate, soil, flora, fauna, natural resources and topography, represents in its totality the physical background of all human activity. Divorced from this background, archaeology is too abstracted from reality to be considered a science. In this book an attempt has been made to approach the problem of the Stone Age cultures of Ireland with a view to their identification and interpretation in the light of the natural history of the area at the time of the first settlement.

During the Mesolithic Period, the basic economy was food gathering—hunting, fishing, fowling and collecting—and in this regard the cultures referable to this phase are comparable with the Palaeolithic cultures of the Glacial Period, as Dr Clark has pointed out (1936, p. xiv). Because of this fact, the question of the classification of backward or retarded cultures surviving in peripheral regions has long been under dispute, and there still

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exist differences of opinion as to the most satisfactory nomenclature to embrace them collectively. Thus they are classed as “Epi-Palaeolithic” by those who would emphasize their connection with the Upper Palaeolithic, while others, who regard the axe as indicative of a new era, prefer the term “Proto-Neolithic”. A few workers recognize both groups and would subdivide the Mesolithic into an early phase: “Epi-Palaeolithic”, and a later phase: “Proto-Neolithic”. Even this is inadequate, however, since the two existed side by side and even influenced each other or were combined in some cases. Professor Menghin, in his *Weltgeschichte der Steinzeit*, has advocated substituting “Epimiolithic” and “Opsimiolithic” to describe backward cultures preserving the food-gathering economy of the Palaeolithic into Neolithic times. But his system of isolating culture cycles from the environment to which they are adapted seems to disregard utterly their function. As Professor Childe remarks (1936 [b], p. 14), an axe to Menghin is “an expression of a historical tradition and not an implement for felling trees”. Whereas it cannot be denied that several distinct cultures are present at this time, it seems clear that the old term Mesolithic, properly understood as forming a separate period during which cultures flourished between the Old and the New Stone Ages in point of time, but in no way forming an evolutionary stage between the two, still meets with wide approval. In a positive sense the Mesolithic defines a stage in cultural development, basically founded on the economy of the Upper Palaeolithic, but profoundly modified by the changes in environment induced by the recession of the ice at the close of the Glacial Period. It is in this sense that the term is used here, since with the coming-in of the new food-producing Neolithic civilization, bringing its associated elements—pottery, domestication of animals, agriculture and polished stone—there is a break in the sequence. Certain elements from the earlier phase, however, continued in use, as no new forms displaced them, but these cannot be regarded as evolutionary. Instead they represent the survival of types of implements for which there was still a need, and in place of which no innovations were introduced by the new culture.

During Early Post-Glacial times, new elements entered Europe from the south, and these, together with the Forest cultures which developed on the North European Plain, penetrated the Lowland Zone of Britain. But the Highland Zone of the north and west was only very indirectly affected from this source. Indeed North-East Ireland and South-West Scotland, isolated by the mountainous backbone of Britain, formed a refuge area where a

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fundamentally Upper Palaeolithic stock survived after the retreat of the ice. The early phase of the Mesolithic in this region was an outgrowth of the Creswellian of Southern Britain, under influence from the Azilian of the Continent, as well as environmental factors. Geographical events of the first order led to further specialization, after the transgression of the Litorina Sea, which profoundly modified the earlier flint industry. By utilizing and synthesizing the evidence deduced from a study of the natural sciences, it is possible to reconstruct the conditions which led to these changes, and to visualize the cultures themselves as entities, functioning in the environment to which they were adapted. Of all the prehistoric periods, the Mesolithic lends itself particularly well to this approach. By such methods as the interpretation of the stratigraphy of the archaeological sites, the evidence of geology, pollen analysis and the identification of the associated fauna, the Irish Stone Age may be regarded as a living, functioning organism, and not a conglomeration of isolated traits and techniques for making stone tools.

The time-span of the Mesolithic varied in proportion to its relative remoteness from the early centres of food production. The art of crop cultivation was slow in diffusing through Northern and Western Europe, as a result of which the Mesolithic lasted longer here than elsewhere. It is now generally held that the Magdalenian persisted in this region until ± 8000 B.C., and that the earliest Neolithic does not antedate 2500 B.C. Hence, at the maximum, the Mesolithic Period covers an interval of roughly 5500 years, a period longer than the entire remainder of prehistoric and historic time combined. But with the advent of agriculture, the earlier food-gathering economy did not come abruptly to an end. In many regions a basically Mesolithic mode of life still survived, and this was particularly true on the periphery. Insular isolation in the case of Ireland, coupled with her peripheral position, led to a considerable time-lag from point of view of the diffusion of new ideas. Thus we find cultures, based on hunting, fishing and collecting, persisting well into the Metal Age and even Early Christian times, although strongly influenced and modified by contact with more advanced sources. Therefore it may be emphasized that, whereas the doctrine of survival is apparent in later periods of Irish archaeology, it is especially applicable to the Stone Age. In fact the descendants of the original Early Post-Glacial settlers form the basic stock in certain sections of Ireland at the present day.