THE ANTIQUITY OF MAN



Genealogical tree, showing the ancestral stems and probable lines of descent of the higher primates.

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THE ANTIQUITY of MAN

BY

SIR ARTHUR KEITH

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Editor of Hughes' "Anatomy"

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PREFACE TO SECOND EDITION

Concerning the Garden of Eden.-The Garden of Eden has often been described before. Long ago an account of it appeared in the Pentateuch; quite lately it has been redescribed in Back to Methuselah. The story as told here takes the reader, not to a single sunlit idyllic glade, as in former descriptions, but to dank and dark caves, gravel pits, limestone quarries, excavations for new docks, and even to trenches cut for sewage pipes, all the world For in reality the Garden of Eden was world wide. over. Even England was part of it-apparently an important part. So were the continent of Europe and the ancient lands of Egypt and Mesopotamia. Our search shows that it extended to the most distant lands of Africa, Australia, Asia, and America. Nor was the drama of the Garden enacted in a single morning; it has been going on for a million of years and is still unfinished. There have been many scenes, and we can see no sign of the curtain being rung down on the last of them. The drama of man's . evolution-or his "creative evolution," as Mr Shaw insists on naming it-was not staged in a favoured meadow for a single performance; it is still proceeding in our slums, country cottages, and palaces, just as it did in the days when man's only roof was the wide dome of the sky.

Concerning Crete, Egypt, and Mesopotamia.—Fully ten years ago the writer of this book made the round of the haunts of ancient man, and in his first edition described what he saw and what he thought concerning such things as were to be seen. Much has happened since then. On

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Concerning Crete, Egypt, and Mesopotamia.—Fully ten years ago the writer of this book made the round of the haunts of ancient man, and in his first edition described what he saw and what he thought concerning such things as were to be seen. Much has happened since then. On again making a tour of the world-strictly in a metaphorical sense-for the preparation of the present edition, it became evident that many new chapters would have to be added and many of the old ones recast. As readers of the former edition will remember, our survey of the evidence relating to man's antiquity begins in England during the Neolithic period. We are at once beyond the reach of written history, but the growing recognition that what the people of England thought and did then was influenced by cultural eddies which travelled slowly westwards from Crete, Egypt, and Mesopotamia now makes it possible for us to fix approximate dates for what was done in prehistoric England. For this reason I have found it necessary to introduce in the present edition a chapter in which an attempt has been made to summarise the evidence relating to man's antiquity in these Eastern lands, and at the same time to note the kinds of men who occupied them in early days. I was the more willing to add such a chapter, not only because our modern city civilisation has its roots in these lands, but for another reason. Like other anthropologists, I am interested in the abstract problem of man's origin and antiquity, but am more directly concerned. with the concrete question of the origin and antiquity of men of our own type. Where and when did the European kind of man come into existence ? All indications point to the East as his evolutionary cradle, but so far the oldest human remains found in Egypt and Mesopotamia are of people who differ from the present inhabitants of these lands in matters of detail only.

Discoveries in England and France.—In England during these last ten years many things have happened which alter our outlook on ancient man. To the list of crania of Palæolithic Englishmen I have had to add three found in a cave in the Mendips by the enthusiastic members

of the Speleological Society of Bristol University, and one from Baker's Hole on the Thames, near Gravesend, entrusted to me for examination by Mr Martin A. C. These bear out the conclusion reached in the Hinton. last edition, that men with long, narrow heads lived in England long before the dawn of the Neolithic period. In France many discoveries have been made regarding the artistic ability and technical skill of prehistoric man, but the one which most concerns us here was made at Solutré, where in strata of Aurignacian date MM. Depéret, Avelin, and Mayet unearthed the skulls of a round-headed people, the oldest of this type hitherto discovered in Europe. I have also found it necessary to give a somewhat full description of the Chancelade man whose skull and skeleton are preserved in the Perigord Museum, Périgueux. He was a man of peculiar parts, some of them being of an Eskimo-like nature, and . on this slight basis the eminent geologist, Professor Sollas, has founded a theory that in late glacial times Europe was inhabited by a Mongolian race.

Discoveries in Germany.—In Germany there have been several discoveries of importance. The one which is of greatest interest to anthropologists is that made at Obercassel, near Bonn, where contemporaries of the Chancelade man have been found. They were rugged examples of the Nordic type—the type which is to be seen to-day in Scandinavia. Then at Ehringsdorf, near Weimar, there have come to light fossil remains of a breed of Neanderthal man, belonging to an older time than the Neanderthal men of France, but later than the more primitive Neanderthaloid of Heidelberg. It does now seem probable that Europe was inhabited by men of the Neanderthal stock throughout the greater part of the Pleistocene period—right from the beginning of this period to the end of Mousterian times—and that this species of man passed through the later stages of his evolution on the continent which became the death-bed of his type. We find the work-floors of Neanderthal man plentifully in England, but so far not a single fossil bone which can be assigned to his body has rewarded an ever-constant search.

Discoveries in Malta, South Africa, and Rhodesia.-In this edition, too, I have given more attention to the human skulls found in the cave at Ofnet, Bavaria, and to those found in the mammoth stratum at Prêdmost, in Moravia. But the discoveries which required the fullest treatment were made on and beyond the bounds of the continent of Europe. The conditions found in Ghar Dalam cave, Malta, throw, I think, a new and strange light on the ways of ancient man. South Africa, as was expected by those who had studied the antiquity of its stone implements, begins to rival Europe as a scene of prehistoric discovery. When preparing the first edition, news came of the discovery of human fossil remains at Boskop in the Transvaal. Since then we have learned much concerning the big-brained Boskop type of South Africa, particularly from announcements made by Mr Fitzsimons and Professor Raymond Dart-more than enough to compress within the limits of a chapter. The most startling revelation of all was that which came from the Broken Hill cave, Rhodesia, towards the end of 1921. Here anthropologists were presented with a fossil skull, primitive in many respects beyond any known to them and yet not unlike what followers of Darwin had expected to find. So important are the bearings of the Rhodesian discovery on our conception of man's evolution that I have devoted two chapters to its elucidation.

Discoveries in Australia, Java, and America.—Then from Australia has come a significant addition to our knowledge of modern man's early history. The fossil

skull from Talgai, Queensland, tells plainly of the settlement of a sea-girt continent at a remote period by men of the modern type. It also revealed the fact that evolution has not left untouched the aborigines of Australia since Pleistocene times. Professor Dubois, the discoverer of Pithecanthropus, has published an account of a remarkable people-the Wadjak race-whose fossil remains he had found in Java, just before his discovery of Pithecanthropus. As I write, there comes from the western frontier of China tidings of fossilised human remains found under circumstances which suggest a great antiquity for them. From time to time newspaper reports have announced discoveries of fossil man in America, both North and South, but all have proved unimportant, with one exception. This exception is the announcement made by Dr Henry Fairfield Osborn, that there existed in North America, about the middle of the Pliocene period, a high form of Anthropoid, one with a decided leaning to the human side, to which he has given the name Hesperopithecus. All that is known of this very distant relative of ours are two very imperfect fossil molar teeth. Even those who have faith in Dr Osborn's experience and judgment, and believe in such possibilities as he has announced, regard the evidence as insufficient to return more than an open verdict.

The Antiquity of Modern Man.—These are the chief discoveries which have caused me to increase the size of the present edition. Augmentation, however, is only one of the aspects in which this edition differs from its predecessor; ever-increasing evidence is compelling me to alter my attitude towards many of the major problems of man's evolution. This is particularly the case as regards the antiquity of modern man—the kind of being who makes up all living races—white, yellow, brown, and black—all of whom have the right, if they have the audacity, to claim the *specific* name of *Homo sapiens*.

One of the reasons which led me to write the first edition of this book was the belief that modern man, particularly his representatives in Europe, was being harshly treated by geologists. If human remains were found in one of the older Pleistocene deposits, and they proved to be modern in size and shape, they were rejected as spurious antiques, no matter what the state of their fossilisation might be. On the other hand, if these remains proved unmodern in character then they were accepted as genuinely old, even if only imperfectly fossilised. It seemed to me then, as it does now, that, in this matter, the geologist's dice was so heavily loaded that it was scarcely possible for modern man to have a fair throw. So I espoused his cause and collected all the cases in which his remains had been found in older Pleistocene strata and believed at the time of their discovery to be as old as the strata in which they were embedded. It was not necessary to prove every instance; it was enough to establish a single case where the geological evidence compelled us to believe that human remains of modern man had been entombed before the opening. third of the Pleistocene period was spent. So I selected the case of Galley Hill man. Now, all experts agree that full-blown modern man made his advent in Europe in. the latter third of the Pleistocene period. In the opinion of the majority of geologists and anatomists, at the present time, this was his first appearance in Europe. With the evidence of Galley Hill man before me, I held that it was not his first but his second appearance. If he came from somewhere late in the Pleistocene, might he not have come from the same place early in the same period ?

I have to confess that as evidence concerning the con-

dition of man in early Pleistocene times accumulates it does not favour my contention. I have expected, during these past ten years, that remains of the modern type of man would be found under circumstances which would prove their early Pleistocene age. No discovery of this kind has been made. Nay, one of the discoveries on which I leaned—that of the Ipswich skeletonhas given way. The Ipswich man has fallen headlong down the scale of time from the farthest to the nearest point of the Pleistocene period. The evidence, as it now stands, leads us to believe that between the date to which Galley Hill man has been assigned and the time which marks the final arrival of the European type, Neanderthal man was in possession of our part of the world. If modern man did make his appearance in Europe early in the Pleistocene, his stay could have been little more than temporary. Then, other evidence on which I relied to prove the permanency of the modern type-to prove how resistant it is to evolutionary change—has given way. We are so accustomed to hear Egypt spoken of as a land where men have bred true to type for 6000 years that we have come to accept the statement as an axiomatic truth. The statement is not quite true; the type persists, but when the aggregate of its representatives is taken into account, the Egyptian type has been modified in detail. Even in Egypt evolution has not been asleep. Then I relied on the resemblance of Englishmen of the Neolithic period to Englishmen of to-day. We can still see among the men we meet survivals of Neolithic types, and if we confine our attention to stature, size, and shape of head, we shall infer that evolution has left such types untouched. It is otherwise if we enter, as I have done these ten years past, into a detailed comparison of their teeth, jaws, faces, and certain bones of their skeletons. It is then that we find that evolution is at work, and that black—all of whom have the right, if they have the audacity, to claim the *specific* name of *Homo sapiens*.

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there are marks by which we can tell the majority of modern skulls from those of a former time.

The Rate of Evolution.—The reader may think I attach too great importance to the reputed antiquity of Galley I do not think so, for this reason. We should Hill man. like to know, not only when men of our kind came into existence, but the rate at which evolution proceeds in the shaping of man. I grew up under the belief that evolution proceeded in a leisurely manner and required long stretches of time to work out her effects-a belief I still cling to. The human brain is an organ of the utmost complexity, made up of so many parts, which require the nicest adjustment as they are elaborated; it does not seem the kind of machine that could have been produced in a hurry. All that we know relating to man's speech and accomplishments seems to indicate antiquity. Therefore the early appearance of modern man appeared to me to fit in with what we knew of the civilisation which has become part of him. The evidence, however, is going against this conception. All the early Pleistocene men, who are beyond question of that date, are more brutal, more simian, than the Galley Hill man. To turn the Rhodesian man into an Australian aborigine, an evolutionary event which may actually have happened, implies a large degree of transformation. To turn the Pleistocene Talgai lad into a modern Australian aborigine entails a marked reduction of tooth and jaw. Heidelberg man required toning down to become a representative of late Neanderthal man. Piltdown man, modern as he is in skull and brain, had a strain of the anthropoid in his teeth and jaws. We cannot run our eye over the lines on which early Pleistocene man was framed without coming to the conclusion that evolution has proceeded at a more rapid pace in the fashioning of man than some of us have hitherto thought. The only

evidence against such a conclusion is the early Pleistocene age ascribed to the remains of modern man found at Galley Hill and other sites, this evidence resting on observations made by geologists. It becomes easier to doubt this evidence than to believe that human evolution ever becomes stationary. Our doubts will be resolved definitely when we find the Pleistocene ancestor of modern man. This ancestral form has not been found as yet, and so I have left all the evidence relating to the antiquity of the modern type of European just as I set it out in 1914.

Duration of the Pleistocene.- The rate at which the human body has changed in more recent times depends on the length of time we assign to the Pleistocene period. At first sight there seems to be no means by which we can tell its duration. We proceed in national and personal affairs as if the present state of our seas, tides, and rivers was fixed and unalterable, and that our weather will continue to range within the same limits of heat and cold, drought and rain. And yet when we look closely we find sea, river, and land all changing. We have not to go back far to find the mouth of the Thames situated near the Dogger Bank in the North Sea, London high above the reach of tides, a land bridge from Dover to Calais, and a land barrier crossing the Mediterranean from Italy to Tunis. The evidence accumulates which shows there is an ever-recurring tidal movement in the earth which alters the lie of sea to land. We have not to go so far back to find England in the grip of an ice age; geologists in Europe, as in North America, are agreed that the last glacial phase ended some ten thousand years ago. There is a tide in climate which seems to accompany the tidal movements of the earth itself.

There are means by which geologists can form a conception of the earth changes wrought during the Pleistocene period, and a computation made of the time

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involved. Unfortunately it has become the fashion amongst academic geologists to hold up their hands in horror when asked to compute in centuries or even One would think from this attitude that the millennia. earth only began to circulate round the sun when history began to be written. There was a time when geologists were less diffident-particularly before it became evident that man's history stretched to the beginning of the Pleistocene period. In 1900 Professor W. J. Sollas made quite a courageous and laudable attempt to fix the duration of later geological periods by noting the rate at which rivers lay down deposits now, and estimating the time needed for the accumulation of deposits of past periods. He fixed the duration of the Pleistocene period-merely to serve as a provisional estimate until a better was found -at four hundred thousand years, and of the Pliocene at five hundred thousand years.

These estimates I was glad to use in my first edition; in the present one the reader will find I have reduced them by half. This reduction has been forced on me by those who are unravelling the sequence and approximate duration of the stone cultures used by man during the Pleistocene period. With our eyes turned to those ages of stone culture we get the impression that in fixing the duration of the Pleistocene at two hundred thousand years our estimate has been stretched beyond a just limit. Mr Reid Moir's more recent discoveries intensify this feeling. Not content with startling the archæological world by finding flints fashioned by human hands under the Red Crag of Suffolk-in a deposit of mid-Pliocene date-he proceeded to show that under the Cromer beds-which British geologists have hitherto regarded as marking the end of the Pliocene period-there lay buried implements of quite a high stone culture-the Chellean. If this is so, then Cromer beds are not so ancient as we supposed and

the Pleistocene period will have to undergo another reduction, becoming little more than one hundred thousand years. If only such a small sum as this is left at our disposal, then we shall have to conclude that evolutionary changes have moulded man during the Pleistocene period at a much more rapid pace than we have hitherto conceived possible. I feel, as Huxley did when Lord Kelvin reduced the time limit at the disposal of evolutionists, that there must be a mistake somewhere.

Glacial Periods .- Everyone who enters the field of prehistory must take note of glacial periods; they are geological milestones. In France, Professor Marcelin Boule finds clear evidence of only three glacial periodsone towards the close of the Pliocene; two in the Pleistocene-one near its beginning, the other near its Professor Marr, Professor Boswell, and many other end. of our leading geologists have come to the same conclusion regarding glaciation in England. There are sure signs in East Anglia of a late Pliocene glaciation-before the deposition of the Cromer beds (fig. 264). Then, after these beds were laid down, came the first and greatest of the Pleistocene ice ages, during which East Anglia was covered by its thick mantle of Chalky Boulder Clay. There was later a second Pleistocene glaciation which fell on Western Europe during the age of Mousterian culture. My difficulty has been in choosing the right names for these two Pleistocene glaciations, but I believe I am following the customary usage in England when I give the term "Mindel" to the first, "Würm" to the second, omitting the "Riss" glaciation of Germany altogether.

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The Law of Uniform or Collateral Evolution.—My conception of the rapidity and manner of man's evolution has been altered in recent years by another circumstance. I have come to realise that the "law of uniform or collateral evolution " has a wider significance than I had formerly believed. The reader will find this matter dis-



TIME CHART.—The cultural periods and their duration are those which have been adopted in this work. Three periods of glaciation are indicated. Chart B is a magnification of the upper part of the main chart, A.

cussed in my final chapter; here I need merely say that such a law implies that species descended from a common ancestral stock may assume simultaneously characters

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which the ancestral stock did not possess. To explain such an occurrence we must assume there was in the ancestral stock a latent bias or tendency to give rise to such characters, but that the tendency did not become operative until the descendants of this stock had broken up into divergent species. The matter concerns students of man's evolution in this way. We find the same structural changes taking place-apparently independentlyin diverse races of mankind-changes which are not to be seen in any ancestral form. This applies to the most distinctive of all the parts of man's body-the brain. In all human forms, even the most primitive of them, we find a tendency for the brain to become large and complex. We presume that this tendency is a common inheritance in all members of the human family. The big-brained races of fossil man may not have had a big-brained common ancestor; it is enough to suppose that the ancestor had a tendency in this direction. And if this is so, we must grant that several human races may have come by large brains long after they had departed from the common ancestral stage.

Concerning Racial Migrations.—The prehistoric world is often described as if it were filled with restless hordes which wandered hither and thither, marauding and butchering. Such a picture has only a slight basis in truth. Migration, I believe, has played only the most minor part in shaping the evolution of man. What we do see is dominant types extending their lands and suppressing or extinguishing the previous occupants of these lands. This has been the case among animal species as among human races since their first appearance. Hybridisation may alter a type but it cannot give rise to novel types, such as have been produced in the course of evolution over and over again. We cannot account for the distribution of modern human racial types as seen at the dawn of VOL. 1.

history unless we presume that they have been evolved in or near the regions of the earth which they now occupy, or did occupy, at the beginning of historical times. In seeking to explain the origin of living races the modern anthropologist is apt to suppose that the Garden of Eden is "far away" and "long ago"; not here and now. He cannot believe that he and the races which he studies are still inside the walls of an evolutionary garden-one which extends from pole to pole. Yet this is the belief which a close study of human races in past and present times compels the earnest student to adopt. The more densely populated parts of the world are also the centres of most rapid evolution. We have to presume, until we can prove to the contrary, that each racial type has been evolved in that part of the world where now we find it, and we have to apply this rule not only to living races but to extinct and fossil races of mankind.

The Piltdown Controversy .- When writing the first edition of this book, the dispute concerning the status of Piltdown man-to be strictly accurate one should rather speak of Piltdown woman, but the male sex has always been chosen as a racial representative-was still unsettled. I had good reason for thinking that the model in which Sir A. Smith Woodward had portrayed the features of . this very ancient Englishwoman was a misrepresentation, so in my first edition I set out her structural peculiarities at great length, believing that those who were learned in the language of the skull would see the reasonableness of It had become evident by then that my contentions. the long-past history of man had to be written from an expert study of craniological hieroglyphs. I knew I should tax the patience of ordinary readers by thrusting before them matter which was intended chiefly for the eye of experts. I had intended to discard these technical chapters in the present edition, but seeing how little some

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of my professional brethren have fathomed the art of setting cranial fragments together I have thought it wiser to leave them untouched. Nay, I fear I have become a greater sinner than ever, for I have given a whole technical chapter to the facial skeleton of Rhodesian man alone.

The system pursued in this book, wherein the reader is taken on a series of tours to prehistoric sites, has certain inherent advantages and also certain disadvantages. In a more systematic treatise one can take up subject after subject, examine each, and give a final verdict. But when we proceed to examine evidence by making a series of visits, we have to discuss matters as opportunities occur, and hence the reader will find that the discussion of some subjects occurs sporadically in several chapters. To amend this defect the index has been made full and explicit.

As in my first edition, so in this, I owe much to many professional colleagues—more than I can name here. Especially am I indebted to Mr Hastings Gilford of Reading, to Dr Rushton Parker, to Mr Morley Roberts, and to Mr Meredith Sanderson for pointing out to me verbal and other errors in the text of my first edition. The liberality extended to me by the President and Council of the Royal College of Surgeons of England I gladly acknowledge here. The Museum of the College has provided me, as it does all students of the human body, with unrivalled advantages. Nor must I forget to mention the help which I have received from Mr William Finerty and Mr E. Smith in the preparation of diagrams to illustrate my text.

ARTHUR KEITH.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Jan. 1925.

PREFACE TO FIRST EDITION

Fully fifty years ago-in 1863, to be quite exact-Sir Charles Lyell told the story of the antiquity of man from a geologist's point of view. His book 1 became a classic; the geologist came to be regarded as the official historian of ancient man. The modern successors of Sir Charles Lyell have maintained the position he established for them. In the books of Sir William Boyd Dawkins,² of Professor W. J. Sollas,³ of Dr G. Frederick Wright,⁴ and of Professor James Geikie,⁵ the world of our remote ancestors is made to live again. The antiquity of man, from a geologist's point of view, has thus been placed clearly and fully before the English reading public. In 1865, Lord Avebury-Sir John Lubbock he was thenapproached the problem of man's antiquity from another point of view. He was primarily interested in the culture, the industry, the civilisation of ancient man; the geological details of the prehistoric landscape took a secondary place in his pictures of prehistoric times.6 He sought to follow the human army to its beginning in the remote past by tracing the possessions it had discarded while on the march. Lord Avebury wrote the story of the antiquity of man from the archæologist's point of view.

¹ The Geological Evidences of the Antiquity of Man. London, 1863 (1st edition).

² Cave Hunting, 1874. Early Man in Britain, 1880.

³ Ancient Hunters, 1911.

⁴ The Origin and Antiquity of Man, 1913.

⁵ The Antiquity of Man in Europe, 1914.

⁶ Prehistoric Times, Williams & Norgate, 7th edition, 1913.

The problem of man's antiquity may be approached from another point of view-that of the human anatomist. The anatomist gives ancient man the centre of the stage; he depends on the geologist and archæologist to provide him with the scenery and stage accessories. It is from the anatomist's point of view that the problem of man's antiquity is dealt with in this book. This method of approach has its difficulties. The anatomist has to trace man into the past by means of fossil skulls, teeth, and limb bones-intelligible documents to him, but complex and repulsive hieroglyphs in the eyes of most people. The publishers have assisted the author to surmount the more technical difficulties by allowing a very liberal use of explanatory diagrams, which make the arguments used in the text more intelligible to the general reader. In many respects this book is supplementary to Lord Avebury's classical work-Prehistoric Times.

The main reason for the appearance of this work at the present time is that the "mystery" of man's antiquity is now culminating in a critical phase-presenting situations which may be described as of almost absorbing Indeed the manner in which the story of 'interest. man's antiquity is now developing recalls the point reached by Dickens in his last and unfinished novel-The Mystery of Edwin Drood. Many learned men have sifted the evidence and tried to solve the problem of Drood's fate-some solving it in this way and some in that. At the present time, geologists, archæologists, and anatomists are sifting the evidence relating to the combined problem of how and when mankind came into existence. On the evidence at present available, the author is convinced that the true solution cannot differ materially from the one presented in a diagrammatic form in the frontispiece of this book. The author's solution is only one of many; time will show which is right.

The mystery of Edwin Drood we can never solve; only the novelist knew what fate had in store, and he carried the secret to his grave. The mystery of man's antiquity stands in a different position. Every year brings new evidence to light-places facts at our disposal which take us a step nearer to a true solution. In recent years discoveries of fossil man have crowded in upon us, yielding such an abundance of new evidence that we have had to reconsider and recast our estimates of the antiquity No discovery of recent date has had such a of man. wide-reaching effect as that made by Mr Charles Dawson at Piltdown, Sussex. Hence the reader will find that a very considerable part of this book is devoted to the significance of that specimen of humanity which Sir A. Smith Woodward named Eoanthropus dawsoni.

In accumulating the material and facts on which this book is based the author has become deeply indebted to many men. The help of some he has acknowledged in the text, but there are many whose names do not appear there. The omission does not mean that he is not grateful to them for their help. He must, however, acknowledge here the assistance he has received from time to time from the officers of the British Museum, from Mr J. Reid Moir, Mr A. S. Kennard, Mr W. H. Cook, the Rev. Edwin H. Mullins, and Mr Courtney Lyne. For assistance in preparing illustrations for this work he is indebted to his friend, Dr Stanley Beale, and particularly to Mr William Finerty.

ARTHUR KEITH.

July 1914.

ADDITIONAL NOTE TO PREFACE OF FIRST EDITION

A YEAR has passed since the proofs of this book were corrected and its preface written. The events of the year have revolutionised the outlook of all of us; we have burst suddenly into a critical phase in the evolutionary progress of mankind; we have had to lay aside the problems of our distant past and concentrate our thoughts and energies on the immediate present. Liège and Namur, which figure in this book as the sites of peaceful antiquarian discovery, have become the scenes of bloody war. And yet, amidst all the distractions of the present time, the author hopes there may be some who will wish to survey the issues of the present fateful period from the distant standpoint of a student of man's early evolution. It is in such a hope that this book is now put forth.

July 1915.

A. K.

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STATE INCOME TAX

By C. G. McCORKELL, Esq., Inspector State Income Tax Department (With the approval of the Commissioner of Taxes, Mr. H. D. Brennan)



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APRIL, 1923