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Evolution and Human Origins

EVERY year brings to light evidence which implies a far greater ambiguity for man than that given to him in the book of Genesis. The caves of Mount Carmel, for example, have quite recently been found to contain deposits, fully sixty feet in thickness and laden with fossil bones of man and beast, to say nothing of a succession of stone implements. The ancient Palestinians represent a breed of the extinct Neanderthal species ; the stone tools are of the kind used in Europe long before the onset of the last glaciation. Even more revolutionary are the contributions which Africa is now making to the solution of the problem of man's origin. East Africa is proving to be particularly rich in deposits laid down during Post-Pliocene times. In the oldest of these deposits, Dr. L. S. B. Leakey has discovered crudely worked hand-axes ; on the overlying beds he has traced a gradual refinement of this type of tool. He has also found fragments of the East African tool-makers. Yet the oldest of these deposits were laid down at least half a million of years ago. So it has been with every part of the Old World : China, Java, Australia, Italy, Spain, France, Germany, Belgium and England, each has contributed its quota of evidence.

Why is it that all the anthropologists who have had to interpret the evidence of these discoveries, have presumed that the theory of evolution is true, and that the Mosaic tradition is wrong ? The first reason is that the Biblical background of time is too restricted ; the evidence now at the disposal of anthropologists requires a time-scale which runs into hundreds of thousands of years. The second reason for the rejection of special creation as a manner of origin, is man's mode of development. He arises, as do all other vertebrates, from a fertilised egg : his development within the womb is almost identical to that pursued by the great anthropoids. Piltown man, Heidelberg man, *Pithecanthropus* (Java man), *Sinanthropus* (Peking man), and Rhodesian man, have never been regarded by anthropologists as special creations : they have presumed that such fossil specimens were twigs which had fallen from the evolving tree of humanity. They have made many attempts—most of them purely tentative—to reconstruct man's evolutionary tree.

Anthropologists are prepared for criticism directed against the form they have given to their trees of human evolution, but they did not

anticipate that anyone would attempt to sweep out of existence their evidence and the superstructure they have built on it. This, however, is what *has* happened. Sir Ambrose Fleming, in his presidential address* on January 14 to the Victoria Institute, asserted "that this sedulously propagated hypothesis of man's age-long evolution by Darwinian Natural Selection . . . is the product rather of the imagination than based on indisputable evidence. . . . The cardinal error is that it substitutes as the ultimate source of all things an impersonal self-acting or automatic process of improvement, in place of the Will and Power of a personal, Self-conscious Creator and Father of Mankind. *Adherence to the doctrine of evolution is entirely inconsistent with belief in the fundamental doctrines of Christianity. . . .*" We have italicised the last sentence of this quotation because it seems to us that Sir Ambrose has loaded his dice very heavily against those who believe in evolution.

How, then, does Sir Ambrose deal with the evidence on which the anthropologists have built so much? First he sweeps away their time-table; he describes it as an "unjustified assumption" and as a "guess". Yet it is the kind of "guess" we all make daily when we seek to assess the age of the man, woman or child we may pass on the street. We have no difficulty in distinguishing between the ages of a boy of ten and a man of fifty. Geologists and anthropologists will certainly be astonished by Sir Ambrose's assertion that the history of *Homo sapiens* can be fitted into the calendar of Biblical dates. He prefers the chronology of William Hales, who assigned the creation of Adam to the year 5411 B.C. to that of Archbishop Usher, who gives 4004 B.C. as the eventful date. He regards "the palæontological or fossil evidence" as being "painfully small". He makes short work of the "discoveries" on which students of man's origin rely so much. "The few scattered remains represented by the Java, Heidelberg, Piltdown and Pekin 'man', as far as they are not truly animal may rather be regarded as biological abnormalities or cases of decadence rather than stages in an upward development."

Having dismissed these fossil remains from his consideration, Sir Ambrose is left with only two early forms of humanity to be fitted into the inspired scheme of special Creation—namely, Neanderthal man and Cro-magnon man. The latter

he hails as real sons of Adam; he recognises in them the moral and spiritual attributes of true man. Seeing that the Cro-magnons appeared in Europe long before the ice-age had ended, and that Sir Ambrose admits that "there is evidence not altogether negligible that a last glacial epoch may have ended not much more than seven to ten thousand years ago", it is difficult to see how they could have made their way into Europe from the Garden of Eden if the event of man's creation did occur at the date postulated by him, namely, 5411 B.C. He apparently forgets, also, that the evidence from Egypt indicates that men were not only living in the valley of the Nile at that time, but were already sowing and reaping, spinning and weaving and burying their dead in the expectation of a life hereafter, for how otherwise can we explain the 'goods' which are found in the graves of the early Egyptians.

Very different is the position which Sir Ambrose assigns to Neanderthal men, who were in existence before the onset of the last glacial epoch. He refuses to regard them as true men; he maintains that they were destitute of "the mental and spiritual power" of true men. In this he is not just, for one of the most representative specimens of this species of extinct humanity, namely, the man of La Chapelle, was buried with weapons and food—which we may justly interpret as evidence of a belief on the part of his people that the dead had a life when the earthly one was over.

In connexion with the origin and nature of Neanderthal man, Sir Ambrose puts forward a "view" which raises a very interesting question. Is it permissible to alter in even the slightest detail the inspired word of the Bible? To do so is to bring the "inspired word" down to the level of a scientific hypothesis, for it is of the nature of a hypothesis that it may be altered to meet fresh facts as they arise. "There is another view," he said, "which may be put forward very tentatively and that is that between the anthropoid apes and true man with his psychical and spiritual as well as bodily structure, there *may* have been some species of hominoids created with more than ape intelligence, but not 'man' in the sense of the word used in the Bible. . . ." This view is put forward as an alternative to the "view" that Neanderthal man is a degenerate form of true man. Sir Ambrose's critics may fairly complain that he has gone beyond any justification obtainable from the Mosaic record. They may also complain that he cites only one version of the creation of man from

* Modern Anthropology *versus* Biblical Statements on Human Origin. By Sir Ambrose Fleming. Pp. 25. (London: Victoria Institute, 1935.) 1s.

the book of Genesis—namely, Genesis, i. 26. "Let us make man in our image, after our likeness." The fact that the book of Genesis is a composite work, and that it includes two versions of creation derived from separate sources has, of course, long been recognised by Biblical scholars. More instructive than the above version is the different description of the creative act given in Genesis, ii. 7, "and the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul". We should have expected, too, mention of the manner in which Eve came into being, and how the prediluvial population of the world had arisen from a single pair.

We are sure that Sir Ambrose Fleming would not wilfully misrepresent the case of his opponents; yet there is no doubt he has been unfair to the Bishop of Birmingham. "There are," said Sir Ambrose in his lecture, "no sufficient reasons for declaring the evolutionary origin of the human race a definitely certain fact. Certainly none for assuring a general congregation in Westminster Abbey, as did Bishop Barnes, on Sunday, Sept. 25, 1927, that 'To-day there is among competent men of science unanimous agreement that man has been evolved from an ape-like stock'." In so far as anthropologists were unanimous in 1927 as they are to-day in regarding man as a product of evolution and not of special creation, we hold that the statement made by the Bishop of Birmingham was amply justified. We rejoice, too, to note that the new dean of St. Paul's, Dr. Matthews¹, supports the evolutionary doctrine of man's origin and in opposition to Sir Ambrose Fleming sees no incompatibility between the doctrine of evolution and the precepts of Christianity.

¹ *Daily Telegraph*, Jan. 18, 1935. "Evolution and the Human Race."

Malaria in Ceylon

THERE is unfortunately no doubt about the serious nature of the epidemic of malaria in Ceylon. The telegrams in the Press report that in the affected provinces no less than 3,435 deaths from malaria and fever occurred during the month of December, compared with a monthly average of 531 for the first nine months of the year. It is admitted, however, that these figures are not final. It has been reported that there have been more than half-a-million cases of malaria, and if the death-rate was 5 per cent, that would give us something like 25,000 deaths.

The first need in an outbreak like this is medicine and food, and the Government of Ceylon has been in the happy position of being able to draw supplies of quinine from both India and Java. There is, however, another greatly complicating factor, and that is famine. The drought which has prevailed—and is generally regarded as the cause of the epidemic—has led to a serious failure of crops, and, even if the rain had not failed, the people themselves have been so weakened by disease that they have not been able to cultivate their fields. We may therefore expect that, in a people weakened by want of food and by malaria, this epidemic will be followed by a serious outbreak of dysentery and a rise in the general death-rate from all causes.

The epidemic itself has not been caused as epidemics frequently are—by the introduction of non-immune people into a malarial territory. The outbreak is in a part of Ceylon which is normally healthy. The new factor has in all probability been an increase in the number of mosquitoes. Among any healthy population in the tropics there is always a certain number of people carrying the infection; and when, as appears to be the case in Ceylon, there is a large increase in the number of mosquitoes, it is easy for the mosquito to acquire infection and to start a serious epidemic. Once a mosquito is infected it remains infected for life; and, further, as this epidemic is occurring among people who are not accustomed to malaria, the epidemic is so much the worse.

Valuable entomological work has been done in Ceylon by the Government Entomologist, but in view of this great epidemic there must be a full reinvestigation. Until we get that, everything is necessarily speculative.

One hypothesis is that, owing to the drought, rivers are not flowing so rapidly as they usually do, pools remain in the rocky and sandy beds, and *A. culicifacies* is breeding profusely. That may be so, but we must not forget that there are some thirty species of *Anopheles* in Ceylon and that they include species of the *A. minimus* group and *A. maculatus*, which in other countries are important carriers of malaria. A grave mistake might be made if a full investigation is not made into what mosquito, or mosquitoes, have been the active agents in producing this epidemic in the various parts of Ceylon to which the epidemic has spread.

Obviously the people of Ceylon were not