

LETTERS TO THE EDITORS

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Evolution of Modern Man (*Homo sapiens*)

THE discovery of a fossil human skull near Keilor, an outer suburb of Melbourne, is a matter of high importance to students of human evolution, who will certainly welcome Dr. Zeuner's¹ confirmation of the great antiquity attributed to it by Mr. D. J. Mahony, namely, that it represents a native Australian of the last (Riss-Würm) interglacial period. In seeking for the homeland of this ancient representative of *Homo sapiens*, neither Dr. Zeuner nor Dr. Wunderly, who was entrusted with the description of the skull, allude to the most probable source of the aboriginal population of Australia, namely, the early pleistocene races of Java, typified by *Pithecanthropus erectus*.

The first to suspect that the Australian aborigines were related to the ancient Javanese was Hermann Klaatsch, who visited Australia in 1904 to make a study of the aboriginal skull. In a report issued in 1908² this passage occurs: "My recent experiences show so many connections between Pithecanthropus and Australian and Tasmanian skulls that I am more inclined than before to accept a very close approximation of Pithecanthropus to the first tribe of human beings". The next link in the chain of evidence came in 1914 when the British Association visited Australia. The Talgai skull was then examined and accepted as probably of pleistocene age, an assumption now vindicated by the discovery of the Keilor specimen, for the Talgai, to my eye, is the more primitive of the two. Then, in 1920, Eugene Dubois published an account of two ancient skulls from Wadjak, in Java; he regarded them (I think rightly) as Proto-Australian in type. Even so late as 1931, I was still in doubt as to the ancestral position of Pithecanthropus³. Then, with the discovery of later fossil types in Java by Dr. Oppenoorth in 1932, and the subsequent additions made to the Pithecanthropoid family by Dr. G. von Koenigswald, it seemed to me the chain of evidence that links the Australian aborigine of to-day with Pithecanthropus of the early pleistocene was complete, and I said so in 1936⁴. In a great monograph which has just appeared⁵, Dr. Weidenreich has reached independently the same conclusion as to the origin of one type of modern man—the aboriginal type of Australia.

Dr. Weidenreich and I are also in agreement in tracing the Bushman of South Africa from the primitive fossil type found in Northern Rhodesia—*Homo rhodesiensis*; we are also both convinced that Sinanthropus lies on or near the line which gave rise to races of the Mongolian type. Here, then, are three of the present-day types of man traced to separate pleistocene origins. Most of us who, a decade ago, were making a special study of the fossil remains of man believed that we should find, some day, the remains of a type which would serve as an ancestor for all living races, and that we should find this ancestral type spreading abroad in the world, exterminating the other early pleistocene types; all the evidence has gone against this supposition. The

only man, so far as I know, who guessed that living human races had, in a physical sense, approached nearer to each other as time went on was the Swiss anthropologist, Karl Vogt⁶. Darwin considered Vogt's suggestion, but rejected it as improbable⁷. Yet it is known that convergence of a very similar nature took place in the evolution of horses.

I have mentioned that as regards the origin of modern races of mankind, Dr. Weidenreich and I have reached a large measure of agreement, all save in the case of that most ancient of Englishmen, Piltdown man (*Eoanthropus*). Dr. Weidenreich is of the belief that all surviving races of mankind have passed through a "Neanderthaloid" stage in their evolution, a stage which was apparently omitted in the case of Piltdown man. He is therefore removed by Dr. Weidenreich from the list of authentic fossil men, his skull being assigned to a modern type of man, while his lower jaw is given to a fossil anthropoid akin to the orang. Virchow solved the mixed simian characters of Pithecanthropus in a similar way, assigning the skull to an ape and the femur to a man. In England we find it hard to believe that there lived in the Weald of Sussex, in earliest pleistocene times, a modern type of man and a rather human-like ape, and that by some strange chance the bones of these two became mingled in the Piltdown gravel bed. Not only was the Piltdown race alive in England when the rest of Europe seems to have been occupied by human stock of the Neanderthal breed, but also this ancient race appears to have come down to mid-pleistocene times; at least it is on such a supposition we can best explain the characters of the Swanscombe and London fossil skulls.

Another problem bearing on the evolution of modern races has again cropped up in connexion with the discovery of the Keilor fossil skull. This skull exhibits a mixture of Tasmanian and Australian features. Dr. Wunderly explains the mixture by regarding Keilor man as a hybrid—the result of a union between Tasmanian and Australian races. We do not know of the existence of these two races until long after the Keilor period; if we believe in evolution, then our attitude to Keilor man should be to regard him as a representative of the ancestral stock from which both Tasmanian and Australian races have emerged. The same problem arises in connexion with the Skhül people of Mount Carmel. They possess both Neanderthal and 'modern' (Cro-magnon) features. Dr. McCown and I explained the mixture by regarding the Skhül people as transitional between the older Neanderthal type and the recent or modern type⁸. Those who maintain that the Skhül people are the mixed progeny of Neander-Modern parents must first convince us that the modern type of man was in existence before the Riss-Würm interglacial period.

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Downe, Kent.
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¹ NATURE, 153, 622 (1944).

² Reports from the Path. Lab., Lunacy Dept., N.S.W., 1, 163 (1908).

³ "New Discoveries Relating to the Antiquity of Man", 28, 312.

⁴ NATURE, 138, 194 (1936).

⁵ "The Skull of *Sinanthropus pekinensis*; a Comparative Study on a Primitive Hominid Skull", *Palaontologica Sinica*, No. 127 (Dec. 1943).

⁶ Vogt, Karl, "Lectures on Man", 468 (1864).

⁷ "Descent of Man", Chap. 7, Pt. 1, 274.

⁸ McCown and Keith, "The Stone-Age of Mount Carmel", 2 (Oxford, 1939).