

# THE FACE OF OUR ANCESTOR;

by

J.T. Robinson, M.Sc.

One of the most important skulls at present known to the world was discovered on April 18th, 1947, in a limestone cave near Krugersdorp in the Transvaal.

We had been excavating at a sight some three miles distant for three months hoping to find remains of the Kromdraai Ape-man. We were without luck, however, as we found many fine specimens of other animals but nothing of our "Beast". We had had high hopes when we came there as it was the sight from which Dr. Broom recovered the only known Kromdraai Ape-man skull in 1938. After having exhausted the sight we moved across to Sterkfontein, the sight where Dr. Broom, during the period 1936-1939, found fragmentary remains of a number of individuals of the Sterkfontein Ape-man, which is very closely related to the Kromdraai form.

Here we were smiled upon by fortune. Within a fortnight we found teeth belonging to a young male of about 12 - 15 years and a child of about 4 - 5 years. The teeth are in a beautiful state of preservation. The following week we found more teeth of the child as well as some isolated teeth of several mature individuals. Finally, on the 18th we found the prize - an almost complete, beautifully preserved skull of Plesianthropus transvaalensis Broom - the Sterkfontein Ape-man - only in this case it was a woman. Dr. Broom and I were both present when our foreman and the natives levered off a block of breccia revealing the skull. Our excitement knew no bounds!

In the month and a half that have elapsed since then we have worked steadily at the skull to get it out of the rock in which it was embedded. This task is nearly complete and we know enough about the skull to be able to draw a good many conclusions. Meanwhile the skull has become famous. Articles and photographers (still and cine) have appeared, or are about to appear, in South Africa, England, America, Australia, New Zealand and Sweden.

The skull is almost complete; Lacking only the teeth and lower jaw - much more complete than any of the specimens so far found. The skull is that of an elderly woman, probably between the ages of 50 and 60 years.

When scientists make statements like the above, the lay reader is apt to smile indulgently or to remark very warmly that scientists are fools - depending on the personality of the particular reader. The basis of both reactions being the thought 'how can they possibly know?' A similar attitude is adopted toward reconstructions such as the one accompanying this article. The reader demands to know - and quite rightly - how I know any better than he does what the beast looked like; especially as it lived, we believe, between 750,000 and 1,000,000 years ago. To answer this - accusation, shall I say, let me give a brief description of how the accompanying illustration was arrived at.

The first step is to make an accurate drawing of the front view of the skull. This is done by measurements, so that the completed drawing is an exact graphic reproduction in orthoprojection. Study of the skull has shown that the sutures between the bones are nearly all obliterated. This is an important clue. We know that in humans the various sutures close at different ages and that in an old individual the sutures are nearly all closed and difficult to detect. This is also true of mammals in general. We can consequently safely conclude that the skull belonged to an individual well advanced in years at the time of death. In this case the teeth - very important structures - were all gone but even the sockets have a story to tell. The sockets of the upper canines ("eye-teeth") are both small, the teeth must consequently have been small and so the beast could not have been a male. The eyebrow ridges are prominent but not unduly so - as would be the case in an adult male. Hence we are safe in concluding that the animal was an elderly female. We now trace, in outline on a fresh piece of paper, the drawing we have already constructed. Over the outlines we draw in the soft parts. From a study of primitive peoples and advanced apes we have a good idea of the thickness of flesh which should be drawn in and of the distribution and amount of hair. The resultant drawing must, therefore, give a fairly accurate idea of the actual appearance which these beasts must have presented.

The next argument of the reader is why, in all conscience, pick on something as ugly as this for a 'missing link'? To give a complete answer to that would occupy a great deal of space and time. However the general reasoning is quite straightforward. As already suggested the teeth are important structures - particularly as far as indications of relationship are concerned. And while Mrs. Ples, as Dr. Broom has named her, had no teeth when we found her, many of the teeth of her relatives have been recovered from the same spot - some may even be her teeth. These show without question that the beast is very nearly human. In fact one particular character occurs on some of the teeth which occurs frequently in man but has never yet been found in any of the apes. The brain - a good replica of this may be obtained by the simple expedient of making a cast of the brain cavity - is built on lines which are much more human than are those of the anthropoid apes. There are as well a host of more technical points about the skull - especially the base - which show that the animal walked almost erect and possessed characters far in advance of those possessed by anthropoids. In fact the skull presents so remarkable an assemblage of near-human characters that we have no alternative but to conclude that this beast must have been an actual ancestor of primitive man or must have been exceedingly closely related to the actual ancestor of primitive man.

Resemblance between the skull of this beast and those of the Great Apes is sufficient to indicate that Plesianthropus and the apes had a common ancestor at some point in the not-too-distant past. That man and the apes had a common ancestor which was not very different from either at some point in the recent (geologically speaking) past is what Darwin believed - not as is so often said, that man developed from the apes.



In association with the remains of Mrs. Ples. and her relatives were found the remains of baboons, hyena, antelope and - the most spectacular of all - a sabre-tooth tiger with canine teeth all of four inches in length and as sharp as daggers. The geologic record shows that the climate and general topography of the Sterkfontein region has changed little, if at all, since Mrs. Ples's time.

We are thus able to picture in considerable detail the home, food and enemies of these, our probable ancestors.

---