

LETTERS TO THE EDITORS

The Editors do not hold themselves responsible for opinions expressed by their correspondents. They cannot undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.

IN THE PRESENT CIRCUMSTANCES, PROOFS OF "LETTERS" WILL NOT BE SUBMITTED TO CORRESPONDENTS OUTSIDE GREAT BRITAIN.

Structure of the Sterkfontein Ape

A LARGE monograph on the South African Australopithecines is being prepared, and is well advanced; but as it cannot possibly be published, at the earliest, for some months, it may be well to give a preliminary note on two points of interest.

Recently an important paper has been published, by A. J. E. Cave and R. Wheeler Haines¹, on the nasal sinuses of the great apes. They confirm the views previously expressed by Duckworth. In the gorilla, they show that there is a large bulbous dilatation of the nasal duct; while in the chimpanzee the maxillary antrum has an extension into the palate. In the Sterkfontein ape (*Plesianthropus*) the antrum differs from that of the gorilla in there being no bulbous dilatation of the nasal duct, and from that of the chimpanzee in there being no palatal extension. In these two characters *Plesianthropus* agrees with man. Fig. 1 is the front view of a natural cast of the antrum of the type specimen, and shows its relations to the second molar tooth. The antrum is bilobate to some extent, and the intraorbital nerve passed through a canal in its upper part.

Some time ago, I was fortunate in finding at Sterkfontein a perfectly preserved os magnum. Though nearly human, it seemed unduly small, and I thought of the possibility of its being the os magnum of a large baboon. At the time, I had no baboon carpus at hand for comparison, and in the stress of other work no further examination was made. On taking up the matter recently, I was forced to the conclusion that this must be the os magnum of *Plesianthropus*. It cannot be a baboon os magnum. Fig. 2 shows this bone, and for comparison the corresponding bones of a large male baboon, a large male chimpanzee, a large male gorilla, and a male and female pure Bushman. In structure the os magnum of the Sterkfontein ape comes nearest to that of man. It has no close resemblance to the corresponding bones of the baboon, chimpanzee or gorilla. If the identification is correct, then the Sterkfontein ape must have had a hand not larger than that of a Bushman woman,

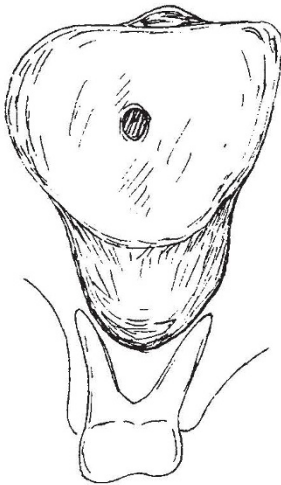


Fig. 1.

FRONT VIEW OF CAST OF THE RIGHT MAXILLARY ANTRUM OF *Plesianthropus transvaalensis*, SHOWING ITS RELATIONS TO THE 2ND MOLAR, AND THE POSITION OF THE INFRA-ORBITAL CANAL WHICH PASSES THROUGH THE ANTRUM.

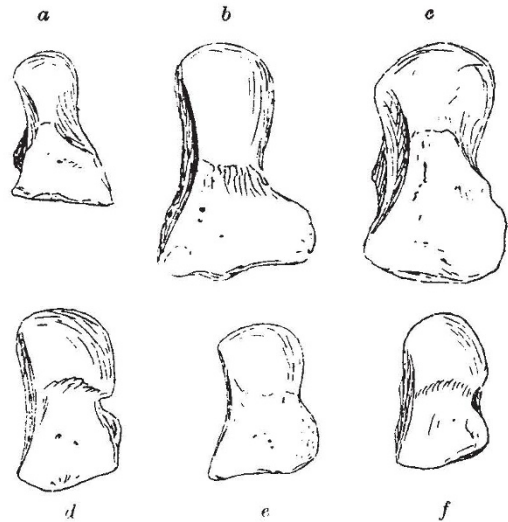


Fig. 2.

THE OS MAGNUM OF THE RIGHT CARPUS OF *Plesianthropus transvaalensis* AND OF OTHER PRIMATES FOR COMPARISON.

- a Os magnum of large male baboon.
 - b " " of large male chimpanzee.
 - c " " of large male gorilla.
 - d " " of male Bushman.
 - e " " of *Plesianthropus transvaalensis*—probably female.
 - f " " of female Bushman.
- All figures natural size.

and quite unlike those of the chimpanzee and gorilla.

The bone was from the same cave and from near the spot where the beautiful small female maxilla was found which I figured in NATURE of May 7, 1938. Not improbably some may argue that this small carpal bone is really human; but no other human remains have been found in the cave, nor even human implements. The maxilla has remarkably human teeth, and we need not be surprised if the being proves to have had a human hand.

If the bone belongs to the Sterkfontein ape—and I do not think there can be the slightest doubt on the matter—then we must conclude that this ape had a hand that was not much used for walking, and that Dart was probably correct in his conclusion, from the structure of the brain, that *Australopithecus* was mainly, if not entirely, bipedal, like man.

R. BROOM.

Transvaal Museum,
Pretoria.
Nov. 27

¹ *J. Anat.*, 74, 493 (1940).