



Fig. 2. Completed section of transect through the canopy 20 m above ground.

canopy, and directly below on the ground.

Preliminary observations indicate that vertebrates such as squirrels and birds that are otherwise unlikely to come very near to man when he is on the ground react differently to an observer in the canopy and can be approached sometimes almost to within arm's reach. Usually they carry on normal activities in the presence of the observer. The reactions of squirrels and other arboreal mammals to the transect walkways is similar to their reactions to vines and other growth that join the crowns of individual trees; they sometimes use them to get from tree to tree.

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References and Notes

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- quitoes* (Macmillan, N.Y., 1949), pp. 15-17; H. E. McClure, *Malayan Forester* **29**, 182 (1966).
5. Hemp rope of equivalent strength is much heavier than synthetic fibers and also tends to deteriorate more rapidly over a period of time.
 6. Supported by grant DADA17-69-G-9278 from the U.S. Army Medical Research and Development Command, Washington, D.C. We thank C. bin Long, M. bin Tahir, G. bin Kaman, P. bin Kandol, and I. bin Chat for constructing the transect through the canopy.

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30 March 1970; revised 9 June 1970

Piltdown Man:

The Realization of Fraudulence

The association of a human cranial vault with a pongid mandible into the taxon *Eoanthropus dawsoni* (1) was not accepted by all authorities. The dualist theory, that the two elements were associated by chance in the same gravels, was proposed as an alternative by David Waterston, professor of anatomy at King's College, London (2); and the distinguished zoologist Gerrit S. Miller, of the Smithsonian Institution, Washington, D.C., strongly supported this point of view (3, 4). Miller went so far as to restrict Woodward's name to the cranial fragment, describing the jaw as that of a new species of chimpanzee, *Pan vetus* (3). His paper contains this remarkable statement, which now reads like prophecy:

Deliberate malice could hardly have been more successful than the hazards of deposition in so breaking the fossils as to give free scope to individual judgement in fitting the parts together.

The late T. D. McCown told one of us (C.P.G.) in 1966 that Miller had confided to him his suspicion that things were not quite right about Piltdown but had been persuaded by his colleagues not to publish his suspicion on the grounds that without positive proof this would be too serious an allegation of scientific fraud.

It may be that Miller already suspected fraudulence when he wrote his 1915 paper. For a number of reasons, however, this seems unlikely; in particular, his description of the mandible as a new species of ape was too serious a committal if at that time he believed its features might not be wholly natural.

The Piltdown material was proved fraudulent in November 1953 (5). In

the following summer, it became apparent that by 1930 Miller was definitely sure that some of the features of the Piltdown jaw were the result of fraudulent alteration: in 1954 the late Remington Kellogg, at that time director of the U.S. National Museum (part of the Smithsonian Institution), told one of us (K.P.O.) that in 1930, when he was about to visit Europe to attend a congress, Miller had requested him to seek an opportunity to look at the original Piltdown teeth in the Department of Palaeontology of the British Museum (Natural History) because he had come to the conclusion that their shape had been artificially modified. It is interesting to note that one of the main reasons why Miller referred the Piltdown jaw to *Pan* rather than to *Pongo*, which it ultimately was shown to be, was the lack of the cusp formation and occlusal crenulation so characteristic of *Pongo*—another reason for believing that as far back as 1915 he did not consider the teeth to be artificially altered.

For Miller's sake, as well as for the progress of paleoanthropology, it was unfortunate that Kellogg did not have the opportunity to inspect the Piltdown teeth and that for a further 20 years *Eoanthropus* continued to represent an awkward and aberrant line of human evolution.

A recent revival of interest in the Piltdown forgery (6) makes us feel that it is appropriate to put these facts on record in a scientific journal, so that, at least *in memoriam*, Gerrit S. Miller receives the credit due him for his remarkable percipience.

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21 May 1970