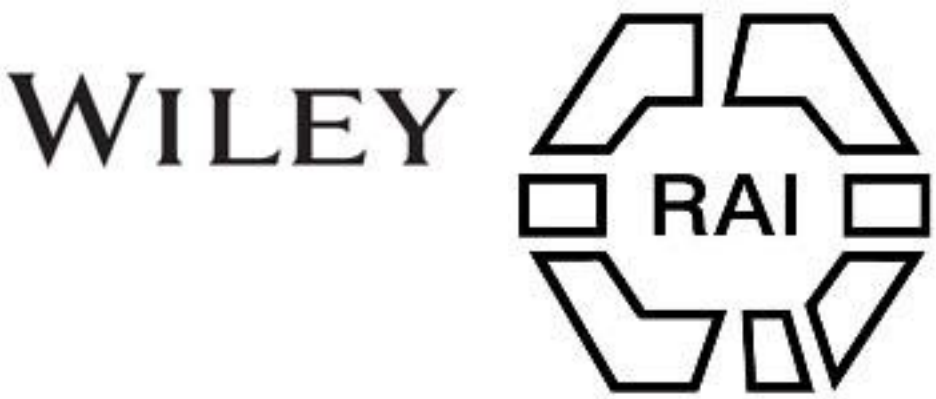

flake originating with man, and his gravel was just as potent an implement maker as the railway journey and no more.

We may grant the possibilities of Nature to hollow out an embayed flint, or to flake a rounded end, so as to have taught earlier man their use. We admit she can split up rounded pebbles, and from these make "hollow scrapers," very much more difficult of construction than those referred to by Mr. Smith, but she cannot produce the counterfeits of the combination tools, with the different kinds of work to suit the different kind of edges; she cannot alter the striking-plane upon the alteration of the flaking-face, to retain a constant flaking-plane; she cannot gradually change her striking-plane from north to south to make the pits of percussion turn coincidently with the hollow; she cannot maintain the constancy of the striking-angle so as to keep all pits (or flakes removed) of uniform length, especially if she has to perform the last-named feats coincidently; and there are numerous other achievements we see on some other disputed objects which lie altogether outside the possibilities of Nature.

The products of Nature are imitative in their outline, from the profundity of natural forces and resources; but it is the very variety of her operations which does not enable her work to stand the tests of physical constancy. So long as it is mere outline, not too closely examined, she is safe. It is only when we study and learn the laws which underlie all flint-working operations of man, and the profound capabilities and incapabilities of Nature in regard to the shaping of hard stones, that we can call a verdict for Nature or the anthropoidea in regard to the eoliths. At any rate if they are ruled out it must be by an appeal to the laws of Nature, and not by an array of unsupportable assertions in direct opposition to them.

W. J. LEWIS ABBOTT.

Africa, Central: Archæology. Seton-Karr.

Obsidian Implements in Central Africa. *By H. W. Seton-Karr.* 89

I have lately returned from a journey on the Mombassa-Uganda Railway. I found scrapers and rough cutting implements along the course of the Gilgil River, washed out of the river deposits, the material being obsidian or volcanic glass from the numerous non-active volcanoes in the district. During a temporary delay of a train in one of the cuttings, at mile 305/400, I took from the *gisement* from the side of the cutting *in situ* three obsidian

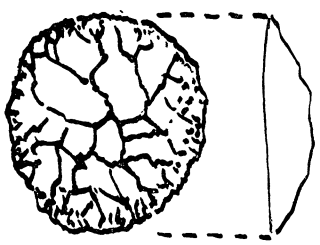

FIG. 1.

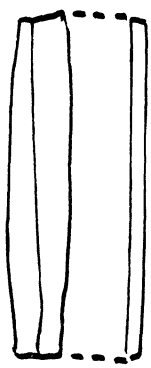

FIG. 2.

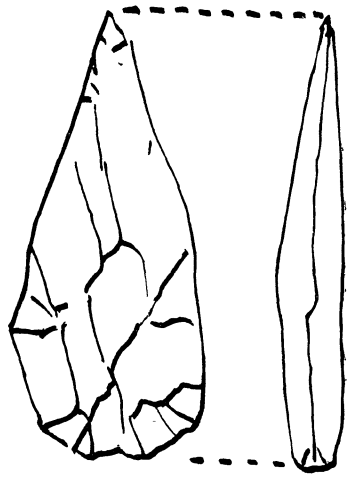

FIG. 3.

implements from 7 feet to 10 feet below the present surface. I forwarded them to Professor Gregory (without knowing that he was in Australia) as he first found similar ones, excepting circular scrapers, which he describes in his book on *The Great Rift Valley*. I found three types: (1) scrapers, (2) cutting flakes, and (3) lance-heads.

H. W. SETON-KARR.
