

THE RIDDLE OF THE OLD STONES :
A PERSONAL RETROSPECT

By SIR EDWARD HARRISON

THE house at Ightham called Old Stones,¹ once the home of Benjamin Harrison, owes its name to its association with the old stones known as eoliths, the subject of this paper. It may be asked whether anything of interest can be related today about an already time-worn subject. The answer is to be looked for in the following retrospect.

There was a period in the dim past when primitive man had for his tools or weapons nothing better than sticks, stones and, it may be, bones. They had to serve all purposes, and the same implement, no doubt, served several purposes and was often re-used. Such a period led, sooner or later, to the realization that a stone with edges chipped by nature might be more serviceable than an unchipped stone. The third stage was reached when man discovered that he could improve on nature by doing the chipping himself ; and then it was that the eoliths came into being.

An eolith, then, is a natural nodule or lump of flint which has been chipped round its edges by man. So primitive a tool is hard to distinguish with confidence from a naturally chipped stone. Yet such a distinction can be made in certain cases to be described later.

A concise account of the original discovery of eoliths and of the developments which followed finds a place here. Although first found and first recognized in Kent, little about eoliths has made its way into the seventy volumes of *Archæologia Cantiana*, although much has appeared in geological and anthropological journals.

The story begins in 1865, when Benjamin Harrison found at South Ash, on the chalk plateau north of Ightham, two chipped brown flints, which, significantly, he took home and kept, without being ready to claim them as artefacts. They were poor specimens, probably nature's work, but they puzzled him for twenty years, during the time that he was devoting himself to collecting many shaped palæoliths and neoliths. In 1886 he picked up an eolith which he looked upon as a "convincer" (his own word) ; and in 1888 he took an opportunity to open the subject with his eminent mentor and near neighbour, Professor (Sir) Joseph Prestwich, who lived at Shoreham (Kent). After examin-

¹ *Arch. Cant.*, LXX, 178.

ing many specimens submitted to him, and visiting in Harrison's company many localities where palaeoliths and eoliths lay in the plateau gravels, Prestwich, early in 1889, read to the Geological Society of London a paper on the palaeolithic implements found near Ightham. Among the specimens illustrating his paper was one (No. 464) described as "a large natural flake worked at edges, found on the chalk plateau." No. 464 was in fact one of Harrison's eoliths, the first to be recognized by Prestwich as "worked" by man.¹

After close examination of specimens and visits to eolith-bearing gravels, Prestwich in 1892 read at the Anthropological Institute a further paper, this time "On the Primitive Characters of the Flint Implements of the Chalk Plateau of Kent"—a paper devoted primarily, though not exclusively, to the eoliths. For many years afterwards a lively controversy was carried on in scientific publications between those who accepted eoliths as artefacts and those who did not. This literature grew with the years, and slowly petered out, more or less, without a clear victory to one set of champions or the other. If, after seventy years, any general conclusion can be drawn, it is that few scientists would today reject all eoliths as natural, and still fewer would accept as artefacts all the specimens sometimes claimed as such. Indeed, the great numbers of so-called eoliths presents a problem that deserves further attention.

Lord Avebury wrote to Harrison in 1911, "I am satisfied that many, of not most, of your eoliths are worked, though the numbers are staggering." How staggering they are has never to my knowledge been put to a simple arithmetical test, based on my personal experience. In three excavations seen by me while the pits were still open (at Parsonage Farm, Stansted; South Ash; and the crest of Exedown on Terry's Lodge Farm), the diggers found supposed eoliths in the proportion of one or more for each square foot of surface uncovered—equal to 27,000,000 in a square mile of similar plateau gravel. That even one per cent of such numbers (270,000) could be artefacts is beyond rational belief. And, if the excavators threw away 99.9 per cent of the finds after close examination, a "staggering" number (27,000 per square mile) remains. That fact is of outstanding significance.

In spite of such a facer, I am confident that Harrison was the pioneer in the discovery of true man-chipped eoliths, even though a vast number of "doubtful" specimens found their way to the waste heap in front of his home. Before advancing my reasons for such a claim, I set down here my own qualifications for such a task, for what they may be worth.

First, I passed many years of my youth and early manhood in a house redolent of eoliths from ground floor to garret.

¹ See *Harrison of Ightham*, p. 133.

THE RIDDLE OF THE OLD STONES

Secondly, during the decade 1888-1897, I searched the Plateau gravels in the company of their discoverer once or more during every available week-end. Afterwards, for a far longer period, I continued the same practice, but less often, as opportunities were fewer.

Thirdly, Harrison's great collection was always at hand, to examine, ponder over, and "stare at" (an expression of Professor Bonney's, who like myself found many "a good stare" instructive).

Beyond what I have stated, I made no systematic study of the eolithic riddle, though it was never long out of my mind.

A distinguished geologist who felt unable to accept the eoliths as artefacts was Mr. S. Hazzleden Warren, who in 1905 or thereabout exhibited a large number of eoliths, including some from Harrison's collection, at the Anthropological Institute, regretting his inability to regard the chipping as the work of man. He did so after correspondence with Harrison in which he repeated his regret, as such primitive chipping, if artificial, was just what was wanted to fill a gap in the evolutionary advance which badly needed filling.

I was present at the meeting, and, without disclosing my identity, I passed to him a pointed eolith which I had found in the earth thrown out from an excavation on the Plateau, and which I myself accepted with confidence as an artefact.¹ He examined it with care and then observed, "Well, if ever I accept any eoliths at all, this is the first specimen that I would acknowledge." His near-admission went far to satisfy me that his mind was not closed on the subject.

After this digression I come to the eoliths that are, in my judgment, readily distinguishable from flints chipped by nature. They include :

(a) Specimens notably both well and regularly chipped, e.g. No. 2775 from South Ash.²

(b) Specimens combining regular chipping with strong indications of design, e.g. No. 8782, a semi-circular flint (a half-moon) which has had half a dozen well-marked chips struck off the curved edge, with a complete absence of chipping on the straight edge.

(c) Specimens of which No. E48, found at Fairseat, is a very instructive example. It has been broken in two by a straight and probably natural fracture across the middle, and one half is missing. The remaining half has been chipped along one edge (man), and battered along the base (nature). The marked contrast between the artificial and natural edges speaks for itself.

(d) Specimens that fall unmistakably into a group all of the same type, and stand or fall together. The best example of this type is

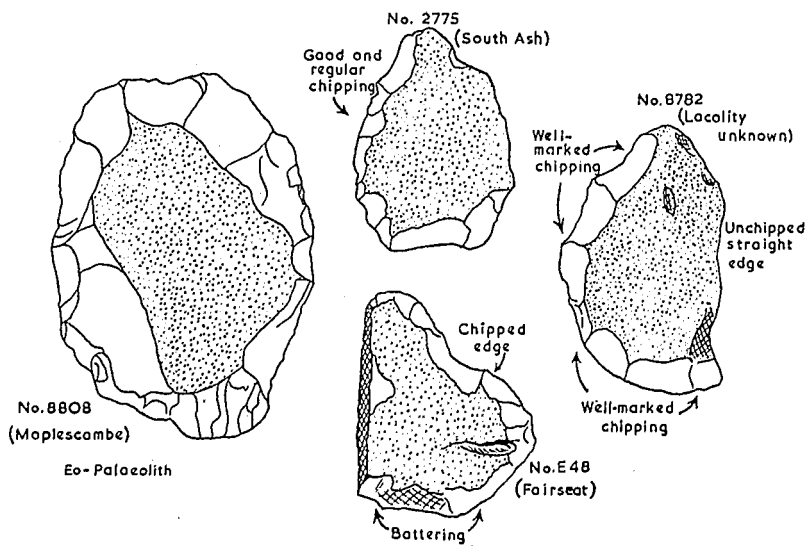
¹ This specimen (numbered 3) sketched by Harrison with others, and published as a plate opposite page 343 of *Harrison of Ightham*, was destroyed in an air raid in 1945.

² Nos. 2775, 8782, E48 and 8808, also the pointed borers, are in their permanent home, Maidstone Museum. *Arch. Cant.*, LXX, 269.

THE RIDDLE OF THE OLD STONES

supplied by the boring tools, characterized by a concave curve on each side of a blunted point, and selected by Harrison to illustrate his own paper on the eoliths.¹ One (numbered 9 and 9a) is missing, and another from South Ash has taken its place in the group.

(e) Certain specimens found, not on the uneroded Chalk Plateau, but in gravels in dry chalk valleys, notably the Maplescombe valley, near Eynsford. These specimens, of which No. 8808 from Maplescombe is an example, suggest a transition from the edge-chipped eoliths to the roughly shaped early palaeoliths.



Four true eoliths (including the transitional specimen) have been sketched to illustrate this paper. They are numbered as already mentioned. A word of caution about sketches and photographs is, however, essential. Specimens lying flat on a table, or in a glass case, when looked at from above do not show their chipped sides satisfactorily. To bring out the edge chipping each side of the specimen must successively be turned up a little, with the consequence that (to use an expression of Sir John Evans when writing to Harrison) "your drawings look better than the stones themselves." It follows that to judge an eolith properly it must be seen and handled—and best, I suggest, at Maidstone Museum.

A short notice will cover all that need be said about the likely uses of eoliths. The answer is, nearly everything. For hammering or

¹ *An Outline of the History of the Eolithic Flint Implements*, p. 21, Plate I, 1904. (Out of print, but a copy is available at Maidstone Museum.)

THE RIDDLE OF THE OLD STONES

bruising, natural stones would be serviceable. For other requirements a primitive race having nothing at hand better than sticks and stones, and possibly bones, must have used them "for all the ordinary purposes of life." Little specialization could be expected when man first looked for a tool, yet it was not entirely absent from his prentice efforts. Adaptation to needs marks the pointed borers, and other eoliths seem well fitted for cleaning skins and scraping poles. Digging stones for grubbing up edible roots and plants, and heavy stones for repelling attacks by man or beast would find their uses on occasion, and other calls for adaptable eoliths can readily be conceived. Thus the same stone may have been used time and again for the needs of the moment.

Some consideration must be given to the likely age of the eoliths, a question which has not yet been finally determined. The primitive character of much of the chipping, compared with the more advanced work done in shaping even the first palæoliths, points to the greater age of the eoliths, and the presence of transitional specimens suggests the evolution of palæoliths from eoliths. But the question, considered by reference to geological evidence, remains open. That there are eolith-bearing gravels which so far have yielded no palæoliths is a fact. Yet it would be rash to rely on such a negative: one palæolith found in such a gravel at any moment might rock the foundations of observations made patiently for twenty years or more. That eoliths as a class are older than palæoliths is a probability resting on common sense, but at present it falls short of geological demonstration.

Passing, however, from the question of the comparative ages of eoliths and palæoliths, we may turn again to the geological evidence, which assigns a great antiquity to the eoliths. The Chalk Plateau of Kent on which Harrison's eoliths were found rises to a height of 770 feet, O.D., immediately north of Ightham, and slopes gently thence down to sea level near Gravesend, an average of 75 feet in a mile or thereabouts. Eoliths worn smooth by rolling in water include specimens found near the present chalk crest. They must have rolled down from higher levels that occupied the present Weald before such heights were eroded by natural agencies, and such an antiquity has to be measured in hundreds of thousands of years.

To the geological pointers to great age may be added the confirmation found in recent progress in nuclear physics. Investigations made into the rate of decay of radio-active substances have led to the conclusion that at least two thousand million years have passed since uranium was formed in the crust of the earth, a period that also measures the time of accumulation of the total thickness of all geological deposits. If this immense stretch of time is apportioned among the several deposits by reference to their thickness and other relevant facts, the

THE RIDDLE OF THE OLD STONES

conclusion is reached that an allowance of about 1,000,000 years must be allotted to the time since eoliths were made and left in the gravels of the Chalk Plateau. Even after allowing for a possible margin of error in such huge figures, some approximation to 1,000,000 years still holds the field.

In the course of this retrospect I have expressed views implying that Harrison was among those who have accepted too many chipped flints as artefacts. Yet he was not indiscriminating. He distinguished the few "convincers" from the numerous "doubtfuls," the latter of which he freely admitted were often "hardly good enough for the witness-box."

His pioneer discoveries, and his tenacity in following them up, well buttressed through the passage of time, as they are, by the more convincing specimens, testify to the value of his researches and to the success of his devotion to the solution of the "Riddle of the old stones."