So far as our present knowledge goes, the so-called Permian rocks of Anglesey, Denbighshire, Lebotwood, Shrewsbury, Coalbrookdale, Wyre Forest, South Staffordshire, Warwickshire, Leicestershire, and North Staffordshire are all essentially similar; and observers are urged to look out for Coal-seams, plant-remains, and *Spirorbis*-limestones.

[The next Meeting of the Society will be held on Wednesday, November 6th, 1895.]

CORRESPONDENCE.

NATURE AND ART.

Sir,—It has been suggested (and the belief is held by many) that the asserted flint implements of the Chalk Plateau of Kent may be divided into two groups—one (A) in which the presumed work is referred to the *agency of nature*, and is therefore non-existent so far as human agency is concerned; and the other (B) of which the work is admitted, but is asserted to be that of Palæolithic Man, and not therefore belonging to a still older race of Man, to which on geological grounds I have assigned them.

B.—It may be admitted as not improbable that some of the more highly finished implements found on the plateau (if not made by the more skilful workman of Eolithic Man) may have been the work of Palæolithic Man. But the mere circumstance of their being found on the same surface with the plateau implements proves nothing, as flint implements of undoubted Neolithic age are likewise found frequently associated with the older plateau as well as with Palæolithic implements on the same surfaces. Further, in a pit dug for the Committee of the British Association by Mr. Harrison, several plateau implements were found in a bed of clay and flints at the depth of six feet from the surface, but no implements of the Palæolithic type were met with there. We may presume, therefore, that the association of implements of different ages on the surface is accidental, and does not always prove that they are contemporaneous.

With respect to the other question (A), I am at forced issue with those who would ascribe any of the forms of the rude plateau flints to any natural agency, such as, for example, as has been suggested in explanation of one form—that of the action of the waves on the shore, or of river-action; and there can be no other. Angular pieces of limestone put into a mill come out rounded marbles. In like manner the sharp angular fragments of flint exposed to the beating of the waves soon lose their sharp angles and become gradually more and more worn, until eventually they are transformed into rounded shingle, such as that which may be seen on Blackheath Common and at Bickley station. No other result is possible. This fact must have been brought home to many who have lounged pleasantly on the sea-beach at Brighton or Dover, but who would not find a bank of plateau flints with their sharp angles and many points, so well fitted for that purpose. Had it been possible for sea- or river-action to have produced such forms as those I have

figured in plates v to ix of "Collected Papers," they should be found in all such shingle of whatsoever age. None are forthcoming.

If the waves had possessed that power, we should not need to go beyond our beach-girt southern shores or our numerous river-gravels. Challenged long ago to produce an implement of the true plateau type from a recent beach, the only specimen that has been put forward as such is one from the beach at Aldborough. I have examined this specimen carefully. It is a *naturally* split pebble of the Westleton pebble beds, of which there are millions, *entire* and *split*, on the adjacent shore. These, in fact, constitute a very large proportion of the beach itself, and those of them which happened to be split have had their edges chipped and blunted by the pounding they have undergone on the shore, so that to that extent they resemble the one plateau specimen figured, fig. 4, pl. ii, in the work before mentioned, with the essential exception that whereas the latter often retain the sharp edges which adapted them for scraping, in the former the edges, which are also worn and blunt, were never suited for that purpose. It is, in fact, one of those natural flints which *simulate* in general outline a worked flint, and in this case I am willing to admit that the simulation of this one simple form of the plateau flint is very good and very deceptive. Scores of such natural forms, imitating even the well-defined shapes of the lance-head Palæolithic implements, have been found in gravel beds.

However, to put the matter to another test, I again repeat the former challenge, and am ready to exchange the two volumes of my "Geology" with any young (or old) dissentient, for half a dozen shore flints (not derived) of any of the plateau types figured in the five plates above named.

I have noticed with regret that in discussing the minor points, the essential and important fact of the plateau implements being possibly the work of the earliest known members of the human stock, has been too much overlooked. While anthropologists have sought for and described the stone implements of modern savages, from the poles to the equator, and speculated on their uses, they have with a few rare exceptions shown an unaccountable indifference, not only in the plateau specimens themselves as specimens, but also an unwillingness to give the subject that attention which alone could settle the question. Here is a problem of high importance with respect to the habits, mode of life, and characters of primitive man, as exhibited in a wonderful profusion of their rude tools, and which is nevertheless neglected and rejected, not from personal investigation, but on an assumed impossibility and by an abnegation of personal responsibility. Surely the subject is deserving of further investigation. I wait without anxiety the results of my challenge.

SHOREHAM, KENT, *July* 15, 1895. JOSEPH PRESTWICH.

DR. CALLAWAY AND METASOMATOSIS.

SIR,—The letter of the Rev. J. F. Blake in last month's GEOLOGICAL MAGAZINE does not call for lengthened comment.