

Wimbledon Common: its Geology, Antiquities and Natural History. By Walter Johnson. Pp. 304. (London: T. Fisher Unwin, 1912.) Price 5s. net.

THE natural history—using the term in its widest sense—of any restricted area has a charm of its own, though it may appeal but to a limited number. A thorough study of the geology, antiquities and natural history of a district is a valuable piece of education, somewhat akin to the study of “types” in biology, and anyone who has pursued such a course will have his interest stimulated, and be in a far better position to enjoy the charms of his own or of a foreign country than had he not done so.

The present book deals with Wimbledon Common, a stretch of moorland and wooded country, in the heart of which it is difficult to realise that Whitehall is but half-a-dozen miles or so distant. An interesting account is given of the geology, botany and zoology of the district, and the antiquarian and historical sides are well done. We have a personal acquaintance with the common and can testify to the general accuracy of the book, and the perusal of it has added much to our knowledge of the district. Mr. Johnson expresses the hope that his chapters may be of service in the cause of “nature study,” and we can cordially recommend it for such a purpose. The book is well illustrated with a number of plates and drawings and four maps. R. T. H.

Telephotography. By C. F. Lan-Davis. Pp. xi + 130. (London: G. Routledge and Sons, Ltd., n.d.) Price 2s. net.

THE getting of a large enough image of distant objects, or of near objects without an unpleasant proximity to them, is a difficulty that often presents itself to the photographer. A lens of greater focal length is theoretically serviceable in such cases, but the long camera that it would require may not be available, and if provided would often be troublesome to manipulate. This accounts for the popularity of telephotographic lenses. Some of them have the positive and negative elements fixed with regard to each other, and then they differ little, if at all, in their use from lenses of the ordinary simple type. But when the two elements are adjustable with regard to each other, in order to allow of obtaining various sizes of the image many new problems arise. We therefore welcome this little volume, in which these problems are dealt with in a practical and very concise manner.

The book includes some remarkable illustrations, such as a photograph of Mount Kenya, in British East Africa, taken from a distance of ninety miles, while at the other extreme as to distance is a photograph of an Emperor moth about life size. A short chapter on “telephoto-micrography” deals with an application of these lenses that is too often neglected. The magnification conveniently obtainable with instruments at present on the market is always very low, the advantage being in the greater distance between the lens and the object, which improves the perspective and facilitates the lighting.

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LETTERS TO THE EDITOR.

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The Natural Fracture of Flint.

SIR E. RAY LANKESTER, K.C.B., in his learned and comprehensive article in NATURE of November 21, has suggested the various lines of research which it will be necessary to follow if a thorough-going knowledge of the mode of origin, structure, and fracture of flint is to be obtained.

The first two, which are intimately associated with the sciences of chemistry and physics, I am, owing to a lack of knowledge of these subjects, unable to deal with. But having for some time past carried out a series of experiments with flints subjected to natural percussion and pressure, I have been able to discover certain facts which I think may interest prehistorians, and help them to decide with more certainty what is human flaking upon any given stone, and what is not.

In order to provide conditions in which flints would strike each other fortuitously, I could think of no better plan than to get a large sack, and, placing eight or nine stones in it, shake it violently about for some considerable time, and afterwards observe whether any of the flints had been flaked in the process.

For my experiments with pressure I used a converted letterpress and a differential screw-press, with which very considerable pressures were obtained.

The rudimentary character of these appliances may be used by some as an argument against the value of the results obtained, but it seems to me that the nature of a blow does not differ whether it is delivered in my sack, or on a sea-beach, or in a fast-running river. In the same manner, pressure is pressure, whether applied in my presses or under a mass of gravel, ice, or other weight of material.

Moreover, I have noticed that stones found on sea-beaches which have been flaked by the action of the sea exhibit the same characteristics as those resulting from my sack experiment, and I think that the flaking on my specimens will be found to be in accord with that of any stones from any geological deposit which can be proved to have been flaked by fortuitous blows or pressure.

I propose now to give a description of the flaked specimens resulting from my experiments, and to show how, in my opinion, they differ from flints found in various pre-river-drift deposits, and which I and others look upon as having been flaked by man.

I will deal first with those chipped by fortuitous blows in my sack experiment.

(1) Flaking was produced upon stones which were more or less of a wedge shape, the thinnest end of the wedge being that from which the flakes were removed.

In the deposits which we examine we find that the flaked flints are of all and every shape, and this leads us to conclude that man has been the fracturing agent.

(2) The large majority of the fortuitous flakes were short and cut deeply into the stone, showing that the blows which caused their removal had impinged almost directly upon the edge itself. This opinion is supported by the fact that the edge is blunted where blows have fallen upon it.

The large majority of the flakes which have been removed from the stones considered to be human are, in the first place, differently formed and longer, and