Pre-Boulder Clay Man.

IT will no doubt be remembered that at the time of the discovery in 1911 of a human skeleton in a sand pit in the occupation of Messrs. A. Bolton and Co., Ltd. (late Bolton and Laughlin), of Henley Road, Ipswich, it was held by some geologists and by myself that the remains occurred beneath an undisturbed stratum of weathered chalky boulder clay. Since this discovery I have been enabled to investigate extensively the small valley adjoining the sand pit in which the human skeleton was found, and to conduct excavations in the immediate vicinity of the spot where the bones occurred.

These investigations have shown that at about the level at which the skeleton rested the scanty remains of a "floor" are present, and that the few associated flint implements appear to be the same as others found on an old occupation-level in the adjacent valley. This occupation-level is in all probability referable to the early Aurignac period, and it appears that the person whose remains were discovered was buried in this old land surface. The material which has since covered the ancient "floor" may be regarded as a sludge, formed largely of re-made boulder clay, and its deposition was probably associated with a period of low temperature occurring in post-chalky boulder clay times.

It appears, then, that the human skeleton found is referable to a late Palæolithic epoch, and cannot claim a pre-chalky boulder clay antiquity. I wish to take this opportunity to state that those who opposed my contention as to the great age of these remains were in the right, while the views held by me regarding them have been shown to be erroneous.

J. REID MOIR.

12 St. Edmund's Road, Ipswich.

Variable Stars.

THERE are good reasons for believing that when a molten sun has sufficiently cooled down to allow of the formation of a solid surface, the solid surface rapidly cools. We may, therefore, regard a cooling sun as passing through three stages: (1) a stage in which the light emitted is very intense and regular; (2) a stage in which the surface from time to time solidifies and breaks up again; in this condition the emission of light would be very variable; (3) a stage in which the crust had become so firm as to be practically permanent, little, if any, light being emitted.

The conditions obtaining during the second stage are supposed to be of comparatively short duration.

May not some of the irregularly variable stars be in stage 2? If such were the case we should only expect a small proportion of the stars to show this variability; for there would be only a small proportion of them in stage 2.

R. M. DEELEY.

Abbeyfield, Salisbury Avenue, Harpenden, October 2.

[This question is dealt with in the Hill Observatory Bulletin, vol. i., No. 2, p. 4.—Editor, NATURE.]

Scarcity of Wasps.

IT would be interesting to know whether the scarcity of wasps which is so marked in this district is general. I have seen only one wasp here this season. I am informed that sixty-seven queens were destroyed in one week this spring on the Earl of Crewe's estate, but this cannot fully account for the absence of wasps. Also, while at Bordon (Hants.) for three weeks in August I saw only one wasp.

Are there general causes to account for the scarcity, such as the cold spring, or disease, or is there a cycle of fecundity and scarcity? Possibly some readers of NATURE have observed and remarked the absence of wasps this season in other parts of the country, and may be able to forecast the probable effect on insect pests next summer.

H. V. DAVIS.

"Noddfa," Wistaston, Crewe, October 3.

CAPT. KEITH LUCAS, F.R.S.

ON Thursday last, October 5, Capt. Keith Lucas lost his life in a flying accident. In his short span of life—he was but thirty-seven—he had become the leading authority on the phenomena of excitation in nerve and muscle. He had gone through several phases. Coming up from Rugby, he obtained a minor scholarship in classics at Trinity College, Cambridge, and entered the college in 1897. He passed to natural science studies, and took a first class in the Natural Sciences Tripos. Soon after this he made a bathymetrical survey of a New Zealand lake. He then began research in physiology, was elected a fellow of Trinity in 1904, and a little later was appointed lecturer of the college and demonstrator of physiology in the University. The line of research he had chosen led to the development of his inherited faculty of mechanical design, and each additional step of his work was marked by the invention of a new instrument or by some striking improvement in instrumental methods necessary for the successful investigation of the problem. His exceptional mechanical ability found further scope when he became one of the scientific directors of the Cambridge Instrument Company.

On the outbreak of war he gave up work at Cambridge and undertook research at the Royal Aircraft Factory. His success in modifying the magnetic compass for use in the peculiar conditions of aircraft flight has been specially noted in the recently published report of the Advisory Committee for Aeronautics. The committee pointed out how greatly flyers are indebted to Dr. Lucas. His subsequent investigations afford an instance of his thoroughness and devotion to the work in hand. He acquired, as an accessory matter, a personal knowledge of the conditions of flight, and obtained a pilot's certificate. It was while engaged in this investigation that the accident happened which cost him his life.

Much as Keith Lucas had achieved in physiology, it is certain that, had he lived, he would have done much more. He conceived early the whole scheme of investigation necessary to settle his particular problem, and he followed it up step by step with unsurpassed logical method. So far as it can be said in science that the determination of a special problem depends on one man, it can be said of Keith Lucas. His friends loved the quiet and unassuming manner which carried so much strength of character.

J. N. LANGLEY.