

On referring to Prof. Boyd Dawkins's 1869 report I noted with surprise that the jaw was not even mentioned. To those acquainted with the history of Kent's Cavern this omission is easily explained.

Throughout the explorations of the cavern, beginning in 1825, all the evidence in favour of the antiquity of man was challenged and explained away by outside critics. Objects in and under the stalagmite were accounted for in one of the following ways, viz.: (1) interments; (2) cracks or fissures; (3) the stalagmite was a comparatively recent invading magma!

For these reasons it would have been unwise, in 1869, to depend on any evidence so certain to be challenged. Indeed, the value of the evidence of the said jaw has not been publicly discussed up to the present time.

After Pengelly's death Sir John Evans published the second edition of his "Ancient Stone Implements," in which, alas! he seems to have followed the earliest explorers in the general assumption of fissures. Sir John observes that in the stalagmite there were few remains, "whether human or otherwise, and these for the most part may have fallen in from higher levels." He further observes that "concerning this long chapter in the history of human existence the records of the cavern are a blank." If I may venture to say so, the distinguished archæologist must have compiled his account of Kent's Cavern from early and late records as of equal authority.

So far as the weighty authority of the chairman of the Kent's Cavern Committee (but not on the committee when the jaw was discovered) is concerned, Prof. Keith would be fully justified in questioning the authenticity of the jaw in question.

In Pengelly's Glasgow lecture (1875) we find the words—"I have found teeth of the mammoth, teeth of the woolly rhinoceros, teeth of the cave hyæna, and teeth of the cave bear in the very uppermost part of the stalagmite; and a human jaw, with four teeth in it, at the base of the same deposit" (pp. 17-18).

In describing a bone pin found under the stalagmite, near the same spot as the jaw was found, Pengelly incidentally describes the stalagmite as "20 inches thick, perfectly intact, and *continuous in all directions*" (Report Brit. Assoc., 1867, p. 31). The italics are mine.

One item of evidence *per contra* must be noticed, viz. that "one of the artificially formed flints [from the stalagmite] has the appearance of being a fragment of a polished Celt or axe, and is the only specimen of the kind which has been found in the cavern." Nothing of the sort, we are told, was subsequently found.

It is much to be regretted that the British Association did not complete its sixteen years' exploration with a general summary of results, with plans and sections. There is, I believe, no general ground plan of the cavern in existence, except the rough sketch which I prepared for the last visit of the Geologists' Association (Proc. Geol. Assoc., vol. xvi., p. 437, 1900).

A. R. HUNT.

Torquay, October 7.

#### A Pearl from Nautilus.

THE accompanying photograph shows a pearl (natural size), alleged to have been found in *Nautilus pompilius*, from the Sulu archipelago. It was lent to me for examination by Mr. T. H. Haynes, of the Montebello Islands, north-west Australia, one of the

NO. 2242, VOL. 90]

pioneers of the pearl-shelling industry in Australia and the East Indies, who is now in England. This pearl was given to Mr. Haynes, about 1884, by a half-breed Chinaman named Oto, brother-in-law to the late Sultan of Sulu, Mohamed Buderuddin.

Mr. Haynes tells me that the pearly Nautilus is occasionally taken alive by the pearl-shell divers, by whom the flesh is considered a great delicacy. Now and then a pearl is found in a Nautilus, but as these pearls are considered unlucky they are usually thrown away. There is a superstition among the natives that, if a man fights with a Nautilus pearl in a ring on his finger, he will be killed. It is probable, there-



A Nautilus pearl. Natural size.

fore, that few, if any, examples of these Nautilus pearls have found their way into the West.

The pearl, which is a perfect pear-shape, slightly flattened at the broader end, weighs 18 carats (72 grains), and is composed of the porcellanous (not the nacreous) constituent of the shell. It is somewhat translucent, white, with a slightly creamy tinge, rather suggesting fine Belek china. The broad end, which has apparently been flattened by pressure of the shell upon the pearl sac, is rather more transparent and vitreous.

H. LYSTER JAMESON.

Royal Colonial Institute, London, W.C.

#### Errors of the Computed Times of Solar Eclipse Phenomena.

WITH regard to Dr. Downing's letter on this matter (NATURE, October 10, 1912), may I be allowed to remark that I was fully aware of his warning that the computed eclipse times of second and third contacts were too late. In fact, I carried with me to Vavau the reprint of his paper to which he alludes (Monthly Notices R.A.S., vol. lxxix., p. 31), which he had kindly sent me, and frequently consulted it. In addition, I had prepared an instrument for projection of the solar image so as to observe the angles of cusps given in his paper, but as Dr. Lockyer also had a similar instrument, we arranged that I should make use of his time signals.

As a further precaution, to obtain the time of the first flash, I had arranged a direct-vision spectroscope adjusted on the C line in the chromosphere at the angle of second contact. Unfortunately, the clouds at the time of second contact rendered all these precautions useless.

I trust that Dr. Downing does not read into my remark, "The total phase commenced about 20 seconds before the predicted time" (Proceedings R.S., No. A595), anything more than a mere statement of a fact.

A. L. CORTIE.

Stonyhurst College Observatory, October 14.