

November 12, 5h. 45m.; secondary maximum, November 12, 9h.

Leonid epoch, November 17, 21h., twenty-eighth order of magnitude. Principal maximum, November 16, 13h. 45m.; secondary maxima, November 16, 13h. 20m. and 15h. 30m.

Epoch, November 19, 9h., eighth order of magnitude. Principal maximum, November 20, 15h. 15m.; secondary maxima, November 20, 6h. 30m. and 16h. 30m.

Epoch, November 19, 9h. 30m., fifth order of magnitude. Principal maximum, November 20, 14h. 30m.; secondary maxima, November 19, 20h. 30m., and November 21, 0h. 30m.

Epoch, November 23, 22h., approximately second order of magnitude. Principal maximum, November 21, 20h. 30m.; secondary maximum, November 22, 1h.

Epoch, November 28, 6h., approximately second order of magnitude. Principal maximum, November 30, 14h. 30m.; secondary maxima, November 30, 2h. 30m. and 11h. 30m.

It may be seen from the foregoing that there are four periods during the last three weeks of November that will probably be characterised by an unusual degree of meteoric activity, viz. November 12, 16, 20-21, and 30. The circumstance that the moon will be eclipsed in the night of November 16 may favour and stimulate Leonid observations, but the former phenomenon will perhaps have nearly ended before the latter may put in an appearance.

November 7.

JOHN R. HENRY.

#### Early Burial Customs in Egypt.

It is suggested in Prof. Elliot Smith's letter (October 27, p. 529) that the burial customs in other countries influenced our observation of the burials in Egypt. On the contrary, the occasional practice of dismemberment in Egypt was a surprise to myself and to others; it is only gradually that the evidence for the wide distribution of such customs elsewhere has been brought forward as a parallel.

In place of all workers in Egypt finding "precisely the same state of affairs," many entire differences of custom are found in other material facts besides dismemberment, as thirty years' experience has proved.

The first principle for the archaeologist to realise in Egypt is the great diversity of thought and custom which prevailed. With four totally incompatible beliefs about the future life, shown by diverse funeral customs throughout the history, it is quite natural that diversity should occur in the treatment of the body in the earlier ages. When the long-promised publication of Dr. Reisner on prehistoric Egypt is accessible, we shall be in a position to define some more localities where certain customs ruled. Discussion of these local variations before the fresh facts are published is premature.

W. M. FLINDERS PETRIE.

STRIPPED of all irrelevant considerations, the question at issue resolves itself into this, "Is there any real evidence to prove, or even to suggest, that the ancient Egyptians ever mutilated the bodies of their dead?"

In reply, I maintain that there is no evidence whatsoever capable of being twisted into the semblance of support to Prof. Flinders Petrie's contention.

Of all the multitudes of so-called "dissected burials" recorded by him, there is only one (see "Deshasheh," 1898) which carries conviction to those familiar with Egyptian conditions as a genuine case of secondary burial. Prof. Flinders Petrie says he has found two more cases this year. That may well be so. We found more than a score of such cases in Nubia.

But they are not evidence of deliberate mutilation of the body. They are all of them instances of some unintentional damage to the corpse—either by unskilled embalmers or by accident.

In reference to Prof. Flinders Petrie's closing remarks, I may state that by the time this letter is printed there will be published in Cairo Dr. Reisner's report (vol. i.) on the Archæological Survey of Nubia, containing his observations on prehistoric Egypt and Nubia.

G. ELLIOT SMITH.

#### Simulium and Pellagra.

THE interesting discovery by Dr. Louis Sambon that pellagra is due to a protozoal parasite conveyed by flies of the genus *Simulium* (NATURE, October 27) is, we may presume, merely the prelude to an energetic campaign of extermination directed against the insect.

It is well that medical men and sanitary officials should realise at the outset of such a campaign that the destruction of *Simulium* flies in any given area is an infinitely harder task than the destruction of mosquitoes. The larvæ of *Simulium* live in rapid streams, attached to submerged rocks and stones, and it is difficult to see how these streams can be drained dry if they are numerous in any particular district. Even if it were practicable to cover the surface of these streams with a film of oil, such a procedure would have no effect on the *Simulium* larvæ, for, unlike mosquito larvæ, the little creatures derive the oxygen necessary for their existence from the water bathing the gills situated at the anterior end of their bodies. In other words, the *Simulium* larva cannot be suffocated as can the mosquito larva.

Finally, it may be noted that the species of *Simulium* are very small flies, consequently to exclude them from houses wire gauze or muslin screens of extremely fine mesh must be employed. Such screens are bound to interfere seriously with the circulation of air in a house, and in a warm climate the discomfort entailed will be almost intolerable.

R. SHELFORD.

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#### The Cocos-Keeling Atoll.

DURING a very short visit to these islands some years ago I was taken across the lagoon in a light canoe, and when wading to land, about a quarter of a mile distant, over the rough surface of fresh coral branches, I suddenly crashed downwards for about 2 feet into a mass of rotten coral which spread over an irregular area some 20 or 30 yards across. I did not investigate this further, as a shark's fin appeared above the water off shore, but Mr. Ross informed me that a good deal of the coral in the lagoon had been "killed" at various times by sulphurous exhalations from below, and had become black and rotten in consequence. Mr. Ross (the owner of the island group) supposed that the wide and deep well-like holes and broad irregular patches of varying depth in the lagoon were due to this cause, which he compared to the sulphurous steam constantly roaring from the crater of the Gedeh and other mountains in Java.

If this comparison be correct, as it doubtless is, the Cocos ring is around the submerged summit of a volcanic cone which has not quite lost its solfataric activity. I have never seen it suggested that such poisonous exhalations coming into the still water confined within the atoll ring might account for the slower growth of the coral, and the deepening of the lagoon by the degradation of the coral branches where the polyps had been suddenly poisoned. It is, however, possible that some such influence may cooperate to prevent the coral flourishing as rapidly as it does outside the ring in the boisterous wash of the fresher waves that are constantly stirred by the trades.

I have not yet read Mr. Wood-Jones's book, but it was the decided opinion of Mr. Ross, founded upon boat navigation, that the lagoon was shallowing, because, as he thought, the submerged summit was slowly rising. If this be so something more than slower growth is necessary to account for the continued existence of the lagoon, since, however slow the growth, it must ultimately in a rising area bring the summit up at least to water-level; but if there is this kind of active degradation, neither slow upheaval nor slower growth could prevail against such rapid destruction, and a comparatively deep atoll with irregular bottom contours would result.

Waterstock, Oxon, October 31.

E. C. SPICER.

It would be ungenerous, after the frank admissions of inaccuracy on the part of the reviewer (NATURE, October 27), to criticise the substance of his review in any more detail; but it is necessary to make some reply to his assertions concerning the development of atolls.