MODERN VIEWS OF MATTER.

Professor Oliver Lodge in the *International Monthly* for May reviews the modern views of matter touching more particularly upon J. J. Thomson's electro-corpuscular theory, and upon Johnstone Stoney's electron theory. It has been known since Maxwell's time that a moving electric charge stores kinetic energy so that work is required to set it in motion and it does work when it is stopped, that is, an electrical charge is endowed with that most perplexing property of matter inertia. Johnstone Stoney's theory is that atoms of matter are aggregrates of electrons, an electron being, as it were, a stretched spot in the ether or a very small electric charge. J. J. Thomson's corpuscular theory is more or less similar to the electron theory only that J. J. Thomson has pretty clearly shown by experiment that what he calls a corpuscle exists, that its mass (inertia) is about 1/500 of the mass of the hydrogen atom and that it carries a definite negative electric charge.

In a very interesting communication to *Nature*, May 10, J. J. Thomson shows that many physical phenomena can be interpreted in terms of his corpuscular theory; for example the proportionality of thermal and electric conductivity, and the variation of electrical conductivity with temperature.

W. S. F.

*NOTE ON A NEW ABYSSAL LIMPET.*

Under the name of *Bathysciadium conicum* Dautzenberg and H. Fischer have described* a new deep water limpet which combines some curious characters. The specimens are simply conical with radiating riblets and an almost membranaceous shell, and have a diameter of 1.5 mm. and a height of 0.9 mm. Some anatomical details are given by Dr. Pelseneer in a note appended to the description. The animal was obtained from the beak of a cuttlefish dredged by the Prince of Monaco off the Azores in 843 fathoms.

Like *Lepeta* it is without eyes or ctenidia, the respiration being carried on by the surface of the mantle. The muzzle appears to be without lappets, the right tentacle has an appendix like that of *Cocculina* (supposed to be a degenerate verge), there are no posterior filaments; an unpaired mandible and long radula are present, the nervous system is that of the Docoglossa and the otoliths are single.

Dr. Pelseneer regards the genital gland (otherwise strictly docoglossate) as hermaphrodite, a condition so exceptional, and, considering the minute size of the animal, so difficult to determine, that judgment may fairly be suspended pending further confirmation of it. The radula as figured leads to the belief that except in the absence of the rhachidian tooth (often degenerate in abyssal limpets) the teeth are like those of *Lepetella;* the major lateral being broken into three pieces which have been taken for three separate teeth by the author cited. If this suspicion be correct the formula is $1 + 2{\cdot}0{\cdot}2 + 1$, for a transverse series of the radula. The creature will be the first true limpet (Docoglossa) to show any trace of a verge, and if really hermaphrodite, the first to exhibit this character. The single otolith is very likely correlated with the small size of the animal. The genus will stand next to *Lepetella* among the Abranchiate Docoglossa.

Wm. H. Dall.

* Bull. Soc. Zool. de France, xxiv., p. 207.

*THE PLANET EROS.*

A letter from the Arequipa Station of the Harvard College Observatory of June 1, 1900, gives details concerning four photographs of Eros taken there in April with the Bruce telescope, by Dr. Delisle Stewart. An adjacent star was followed in an eye piece and by means of a micrometer screw the photographic plate was moved with regard to it by an amount and in a direction equal to the motion of Eros. The stars thus appeared as trails and Eros as a point. Approximate positions were determined from the plates at Arequipa with the results given below. Paper prints of two of these plates were sent to Cambridge and measures of them are also given. The negatives are now on their way to Cambridge, and as soon as received accurate positions will be derived from them.

These appear to be the first observations of Eros since its conjunction with the Sun. The