quite reached it. After our visit a gale, in November 1893, bared the foundations of the church: plans were made, which have been preserved. On Wednesday, January 23rd, 1895, a storm arose, described by a resident as beyond anything he had seen. At six p.m. the waves were breaking furiously against the tower and their spray was flying over its summit. At seven it had fallen.

The line of sand-hills forms a defence against the sea for a level tract of cultivated country behind. My sketch indicates a breadth of about twenty yards for this rampart and a height of some twenty or thirty feet. An account says that "the havoc to the sand-banks baffles description . . . . they are not half their original size in breadth and height . . . . the sea overflowed the gap-way and the manor house was in danger of being inundated . . . . Eccles has had a very narrow escape of the catastrophe which happened in 1605, when hundreds of acres of land, with sixty-six houses and their inhabitants, were swept away in one night."

Lyell adduces this ancient ruin among his evidences of the encroachment of the sea on the eastern coasts of England. His figures appear faithful, for the appearance and dimensions of the sand-dunes at our visit were just the same as in them. The figure of 1839 shows the tower emerging from the very centre of the line of sand-hills. That of 1862 shows it nearly free of them on their seaward face, at a distance from their centre about equal to its own height. As its height was about forty feet this might indicate that the sand-hills had travelled inland about forty feet in twenty-three years. At our visit in 1893 we found the line of dunes entirely separated from the tower, and we measured its distance from their centre as about thirty yards, which gives an advance of ninety feet in fifty-four years. Lyell alludes to the possibility of a subsidence in the coast, but this is not required to explain the march of the sand-dunes.

I have to thank Professor Bonney for the loan of his notes, and the Rev. J. S. Whitney for an answer to enquiries, and for an extract from the "Eastern Daily Press" of January 26th, 1895, containing an account of the event.

## X.—On the Genus *Plutonides* (non *Plutonia*) from the Cambrian Rocks of St. David's.

By Henry Hicks, M.D., F.R.S., F.G.S.

QUITE recently, Mr. B. B. Woodward, F.G.S., of the British Museum (Natural History), called my attention, for the first time, to the fact that the name *Plutonia*, which I adopted for a genus of Trilobites in 1868, had previously been used by Stabile (Atti. Soc. Ital. Sci. Nat. vii, p. 121, 1864) for a genus of Mollusca. As Stabile's generic term has therefore a priority of four years it is necessary that I should rename the Trilobite, and it has been suggested to me by Mr. Belinfante, B.Sc., Assist. Sec. Geol. Soc., that *Plutonides* would be the most suitable term and the one least likely to lead to confusion. In the Report of the British Association for 1868, p. 69, where the genus is first mentioned, after describing

the beds in which it occurs I refer to it as follows: "The new genus, for which the author proposes the name *Plutonia*, is only known to occur in these beds. This remarkable fossil is of very large size, equalling, indeed, in this respect *Paradoxides Davidis*. It is, perhaps, also more nearly allied to the genus *Paradoxides* than to any other known, but its peculiar character of being covered all over with very strong tubercles, associated with an unusual position for the eye suture, and straight, very long thoracic pleuræ, is sufficient to stamp it a new and distinct genus."

It was more fully described by me afterwards in the Quart. Journ. Geol. Soc. vol. xxvii, p. 399, as *Plutonia Sedgwickii*. One species only has been discovered and no complete specimen. As mentioned above it resembles, in some particulars, the genus *Paradoxides*; but I know of no species in that genus which has such wide pluræ, or such a pronounced ornamentation on all parts of the body. The pygidium has not been found; but some fragments which have turned up seem to indicate that it approached more nearly that of *Anopolenus* than to *Paradoxides*. *Plutonides* greatly exceeded in size any specimens of *Anopolenus* yet discovered, as portions of the body, which I obtained, show that it could not have been less than seven inches across at its greatest width, or one inch wider than the largest *Paradoxides* found by us at St. David's, now in the Museum of the Geological Society. Its length, however, would evidently be less than *Paradoxides*, with fewer segments to the thorax.

## REVIEWS.

I. — Collected Papers on some Controverted Questions of Geology. By Joseph Prestwich, D.C.L. (Oxon), F.R.S., F.G.S. (London: Macmillan & Co., 1895. 8vo, pp. xii and 280.)

THE book before us consists of a series of articles, the subjects of which have occupied the author's attention during many years, and concerning some, if not all, of which he is more or less at issue with many of his fellow-geologists. "With respect to the main facts of geology," says Professor Prestwich, "we geologists are in general of one opinion, but with respect to the explanation of many of those facts, we hold very divergent opinions."

Article 1 treats of "The Position of Geology," and is directed against the prevailing school of geologists in this country who hold the doctrine of Uniformity—uniformity of action both in *kind and in degree* throughout all geological time; and the Continental school who hold uniformity in *kind or law*, but not *uniformity in degree*.

The points touched upon embrace the rate of sedimentation, calculated upon the transporting power of rivers, which are estimated to lower the level of the land one foot in 6000 years, or one thousand feet in 6,000,000 years. The author remarks that the rate might be doubled if the calcareous matters held in solution, as well as the matter held in suspension, were taken into account. Professor Prestwich also objects to a *mean rate* of elevation of land at $2\frac{1}{2}$ feet