

CORRESPONDENCE.

Restoration of Pteraspis.

My dear Sir,—I should like, with your permission, to make a remark upon the Rev. Hugh Mitchell's interesting letter and sketch of *Pteraspis*. It seems to me that the specimen there sketched agrees with Professor Huxley's restoration (given in a former letter) in all particulars, saving the absence of lateral cornua, the form of the terminal angles, and the presence of the two large apertures which Mr. Mitchell has drawn in his letter. These differences are, I think, to be accounted for by the imperfect condition of Mr. Mitchell's specimen. I have seen some hundred specimens of *Pteraspis* with the lateral cornua and with no posterior apertures, but in every point agreeing with Professor Huxley's restoration. I have also seen some hundreds of specimens in a fragmentary condition, showing no cornua, no spine, no rostrum, and often showing apertures in the test, caused by fracture; but most palæontologists will, I think, agree with me in considering the more perfect specimens as indicating the true form of the shield of *Pteraspis*, and will attach no weight to the negative evidence of imperfect specimens. The restorations of *Pteraspis* given by Mr. Mitchell in May last, differ as much from the present one as it does from Professor Huxley's. In the former restoration there was no rostrum and no spine; but the discovery of fresh specimens has shown that the Scottish *Pteraspides* did possess spines and rostra like their English brethren. No doubt a little time will suffice to show that they also possessed lateral cornua and a form of the central disk, in nowise differing from that of the English specimens.

With regard to the under surface of the head of *Pteraspis*, even the great abundance of specimens in Herefordshire has afforded no evidence, save that of a negative character, and it seems to be a fair conclusion that it was unprotected; the mouth being placed as in the sturgeon, and perhaps of the same suctorial character. I may observe here, that in August last I obtained the first specimen of the scales of *Pteraspis*, from a quarry in Herefordshire. They are similar to those of the dorsal series of *Cephalaspis*, and are attached to a portion of the cephalic shield.*

Truly yours,
E. RAY LANKESTER.

PROCEEDINGS OF GEOLOGICAL SOCIETIES.

CIVIL ENGINEERS.—*January 26.*—"On the East Coast between the Thames and the Wash Estuaries." By Mr. J. B. Redman, C.E.—The object of this paper, like that of 1852 on the South Coast, was to describe the characteristics of a range of coast within certain limits, to trace the changes produced by constant natural causes, and the resultant influences on the various harbours; those of Harwich, Orford, Southwold, Yarmouth, Blakey, Wells, and Brancaster being mainly dependent on such natural barriers as those described; as also their improvement, or deterioration, which

* A communication on the discovery of these scales has been addressed to the Geological Society.