

**Article IV.—NOTE ON THE HYPOSTOME OF LICHAS  
(TERATASPIS) GRANDIS HALL.**

By R. P. WHITFIELD.

In the Fifteenth Rept. State Cab. N. Y., p. 110, 1862, Professor Hall describes a species of trilobite under the name *Lichas grandis*, and in the 16th Rept. N. Y. State Cab. he founds the genus *Terataspis* on this same species.

All the remains yet noticed of this species have been fragments, and until the present time no remains of the hypostome have been described, but during the autumn of 1896 the Rev. S. Parsons, of Paterson, N. J., brought to me for identification two fossils obtained from loose boulders of Schoharie grit, obtained about one mile north of Paterson, N. J., which I take to be the separated hypostomes of that species. He has also obtained other parts of the organism, and many of the characteristic fossils of this peculiar bed of rock from the same series of boulders.

These hypostomes are quite large, even in proportion to the size of the trilobite, as compared with those of other species of *Lichas*, and are very broad in proportion to the length, being about one-third wider than long, whereas those of *L. boltoni* and

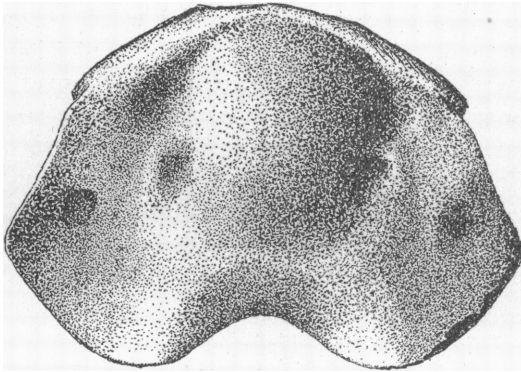


Fig. 1.

Fig. 1. Upper surface of the plate, natural size.



Fig. 2.

Fig. 2. An outline in profile showing the depth of the anterior border a.

allied forms, like *L. avus* of Barrande, are always longer than wide, or nearly equal in length and width. They are, however, more like *L. pachyrhinus* Dalman and *L. celorrhin* Angelin. The central protuberance is not as well defined by the furrows as in *L. boltoni* Bigs., but is bordered by two rather deep pits on each side in the position of the median furrows and its inner extension, while the outer division backwards is so extremely faint as to be readily

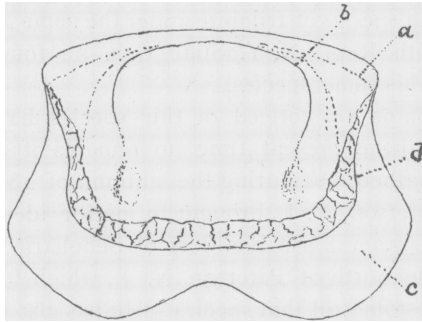


Fig. 3. Outline, natural size, of the under side of the second specimen: *a*, the line of the anterior margin; *b*, limit of the protuberance; *c*, the infolding of the crust of the lower surface, the line *d* being its forward extension.

overlooked. On the outer lateral portion of the plate near the margin there is a third deep pit unlike that of any other hypostome, and I am somewhat in doubt as to whether it may not be accidental. The transverse furrow limiting the protuberance behind is obsolete, and the central emargination of the posterior border is less than in *L. boltoni*, while the anterior border joining the rim of the head on the under side is unusually broad and deep. The under surface of the plate is exposed on the second specimen by breaking away the filling between the crusts, and shows that the infolding of the plate below extended on the under side to a distance equal to fully one-fourth of the length of the plate from the posterior margin.

The great difference between this plate and the corresponding parts of the ordinary forms of *Lichas* like *L. boltoni* Bigsby and *L. avus* Barrande would seem to warrant a generic separation of this from *Lichas*. And it is probable that the peculiar forms of the Lower Helderberg group corresponding to *L. pustulosus* Hall will be found to resemble this one whenever they may be discovered.