

UNUSUAL FORMS OF *CTENOPTYCHIUS*.

SIR,—Among the numerous fossil remains which I have recently obtained from the shale overlying the Low Main Coal-seam in Northumberland, there are two peculiar forms of *Ctenoptychius*, which seem worthy of being illustrated and recorded in your pages.

The two species, *Ctenoptychius pectinatus*, and *C. denticulatus* are very abundant, but they are of the usual forms, with serrated upper edges, the serrations varying from eight to upwards of twenty in number, and the roots extending downwards from the body of the tooth or tubercle connected with the serrated edge.

TEETH OF *CTENOPTYCHIUS*.

Fig. 1.



Fig. 2.

Fig. 1. With 33 Serrations (twice natural size).

Fig. 2. With 17 Serrations (three times natural size).

The two specimens to which I desire to direct special attention (see Woodcut) are the only two I have obtained with lateral instead of perpendicular extensions. There is in the two specimens an entire absence of the root-like processes which ordinarily characterise *Ctenoptychius*. The only extension from the serrated bodies of the teeth proceeds from one side, and the teeth present the appearance of miniature combs, with long, slender solid handles. I shall best convey an accurate idea of their sizes, forms, and general appearance by the annexed outline sketches. (See Woodcut above.)

I have just learned that several specimens in my collection from the Northumberland Carboniferous strata, which I have been ascribing to *Megalichthys*, are in reality *Parabatrachus*, a frog-like reptile, which was originally discovered in the Glasgow Coal-measures, and was described by Professor Owen in the *Geological Journal*, vol. ix. The glazed and punctured character of the head-plates bear a remarkable resemblance to those of *Megalichthys*; their forms, however, differ considerably.

T. P. BARKAS.

NEWCASTLE-ON-TYNE, Dec. 5, 1868.

ON A NEWLY-DISCOVERED LONG-EYED TRILOBITE FROM DUDLEY.

Under the above heading, I published an Article in the *Geological Magazine* for November last, p. 489, in which I described a specimen of *Calymene Blumenbachii* having long eye-stalks, obligingly lent me by Mr. E. Hollier.

On Nov. 3rd I received a note from Mr. Charles Ketley, of Smethwick, informing me that he knew the specimen, and that the so-called eye-stalks were, in his opinion, only parts of the underside of the head-margin of another Trilobite in contact with, but not a part, of the specimen described.

On Nov. 9th Mr. Samuel Allport, of Birmingham, wrote me almost to the same effect.

On Nov. 17th Mr. Henry Johnson, of Dudley, forwarded me a very long criticism upon my article, insisting strongly upon the same explanation of the supposed eye-pedicels as that already suggested by Messrs. Ketley and Allport in their letters, and he published the same letter in full in the "Dudley Guardian" of Nov. 21st.

A very animated correspondence ensued in that paper and in the "Herald" (Nov. 25th, Dec. 2nd and 5th) between Messrs. Hollier and Johnson. A gentleman signing himself "Student" added a letter, and I also wrote a brief reply.

I may state that the specimen was most critically examined by many of my scientific colleagues before I described it, and I found that several of them, upon a subsequent examination, still held to the opinion that the junction between the glabella and the supposed eye-pedicels could not be accidental, and was certainly not artificial; and moreover, that the surface of the glabella and that of the horns was at parts continuous, where not cut in developing.

Mr. Johnson states that the raised supraciliary margin of the true orbit was distinctly visible near the base of the pedicels when the Trilobite was shown to him by the workman before its final development.

The most dexterous artist could not have united the head and the horns to produce the effect seen in the specimen leaving the matrix unsullied as it is; but it was quite possible, by a few clever touches, to render the apparent union of the parts still more complete, and that is what really seems to have been done. Whether the portions which formed these so-called eye-peduncles are really the missing portions of the incurved under-margin of the genal-border of the head of the same Trilobite, *naturally* (not artificially) displaced, so as to project from the two orbital apertures; or, whether they were produced from the corresponding portions of the head of another individual, fortuitously brought in contact with it whilst the matrix was still soft and yielding, the effect produced is nevertheless very remarkable, and so like a true union of parts as to have misled other and far abler observers than myself.¹

With regard to this Trilobite I have said in my paper (p. 490) that "In all points except in the remarkable eye-peduncles, the specimen appears to be a true *Calymene Blumenbachii*. Indeed there are specimens in the Museum collection which match Mr. Hollier's Trilobite most exactly, save in this one particular." The constant absence of the cornea of the eye in *Calymene* and the elevated border surrounding it, led me to conclude that in this, as in *Asaphus*, *Encrinurus*, &c., the eyes were raised on foot-stalks, which had been in this instance crushed downwards from their more erect normal position, and apparently carrying with them the genal portion of the head.

HENRY WOODWARD.

¹ See Report of Meeting of the Dudley and Midland Geological Society, p. 37,