

ART. LII.—*A Larval Form of Triarthrus*; by
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IN the August number of this Journal, Mr. W. D. Matthew made the important announcement of the discovery of antennæ and other appendages of *Triarthrus* found by Mr. W. S. Valiant near Rome, N. Y. The Yale Museum has received considerable material of a similar nature, which will doubtless furnish additional details of the structure of this trilobite. In the preliminary examination of this material, a number of larval specimens have been discovered, and several other points of interest observed, a few of which are here noticed.

A description and illustration of the nearly complete metamorphoses of *Triarthrus Becki* was given by Walcott in 1879,† based upon specimens from near Holland Patent, N. Y. The earliest stage then known in this genus consisted of individuals having the cephalon and pygidium defined and one thoracic segment. With the new material, it is now possible to add an earlier stage in which the thorax is undeveloped and the cephalon predominates, while the other parts are not clearly differentiated. This stage corresponds to the earliest yet discovered in other genera; as in *Sao*, *Ptychoparia*, and *Acidaspis*.

The larval *Triarthrus* at this period is ovate in outline, widest behind, where it also attains its greatest convexity.

* Quar. Jour. Geol. Soc., Aug., 1891, vol. xlvi.

† Transactions of the Albany Institute, vol. x.

The frontal margin is marked by a convex fold of the test. The axis is annulated. The anterior six annulations apparently belong to the cephalon, the sixth one being considerably stronger than the others and probably representing the occipital ring. The pygidial portion is defined by a narrow shallow transverse furrow; and the axis has two annulations.

Near the lateral anterior margins are two slight elevations which may represent the palpebral lobes of the eyes, and from them extend two furrows curving inward to the axis and dividing the cephalic region into two portions. The occipital pleura are indicated by slight depressions extending from the occipital ring.

The specimen illustrated in figure 1 has a length of .63^{mm} and a width of .46^{mm}.

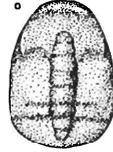


Figure 1.—*Triarthrus Becki*; dorsal view of larva. $\times 30$.

Nearly all the specimens with appendages are complete, and lie with the ventral side upward. A few isolated fragments only have been observed. Individuals of all ages occur, the majority being about half grown.

So far as noticed, the other species of fossils, which are found strictly in the same association, are young individuals of *Trinucleus concentricus*, *Schizocrania filosa*, *Leptobolus insignis*, and *Orthis (Dalmanella) testudinaria*, ostracoda and graptolites of several kinds, indicating that the deposit belongs to the Utica slate.

Yale Museum, New Haven, Conn., Oct. 9th, 1893.