

a hand magnifier? If not, the beautiful and perfect structure which it displays will compensate for the trouble of procuring the means to make the observation. Some scores of little lenses, arranged with the most perfect symmetry, each set in its little telescopic tube, form upon the retina of the little insect the various portions of an image of some external object. Such eyes had the trilobite (Fig. 28). It is marvelous that such delicate structures have been so

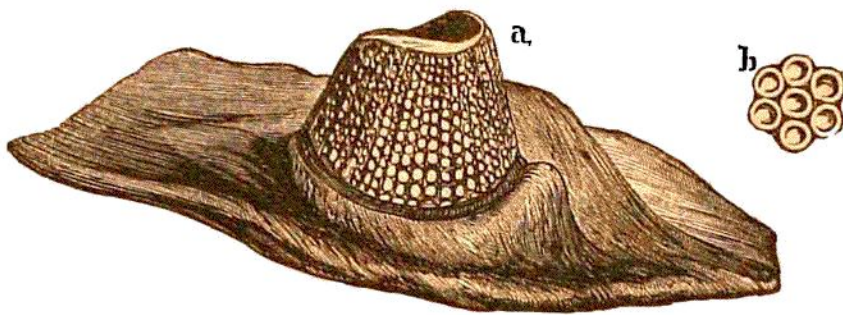


Fig. 28. The eye of a Trilobite magnified.
 a. Eye of *Asaphus caudatus*. b. A few facets of the eye of *Calymene macrophthalmus*.

perfectly preserved as in some trilobites which I have examined from the neighborhood of Dubuque, Iowa. These, however, existed in the period following the Potsdam. The trilobite was tri-lobed in two respects. Longitudinally, the oval form was divided into head, body, and tail; while in the other direction a couple of lengthwise grooves divided the animal into middle, right, and left lobes, or regions.

In this earliest scene of animalization, mollusks and radiates play comparatively an inconspicuous rôle. But it must be remarked that both these types of existence had been introduced. Among the molluscs we have found, besides the representatives of Brachiopods already mentioned, a few other members of the same class, and also some coiled univalves, which belong to the higher class of Gasteropods. Among the radiates we have in the Old World a few representatives from the middle of the sub-kingdom in point of rank, while among Protozoa we find a few forms related