

sediment of the oldest seas, and in the vestiges which remain to us of the earliest ages of organic life on the globe, that is to say, in the argillaceous schists, we find both plants and animals of advanced organisation. But, on the other hand, during the greater part of the primary epoch—especially during the Carboniferous age—the plants are particularly numerous, and terrestrial animals scarcely show themselves; this would lead us to the conclusion that plants preceded animals. It may be remarked, besides, that from their cellular nature, and their looser tissues composed of elements readily affected by the air, the first plants could be easily destroyed without leaving any material vestiges; from which it may be concluded, that, in those primitive times, an immense number of plants existed, no traces of which now remain to us.

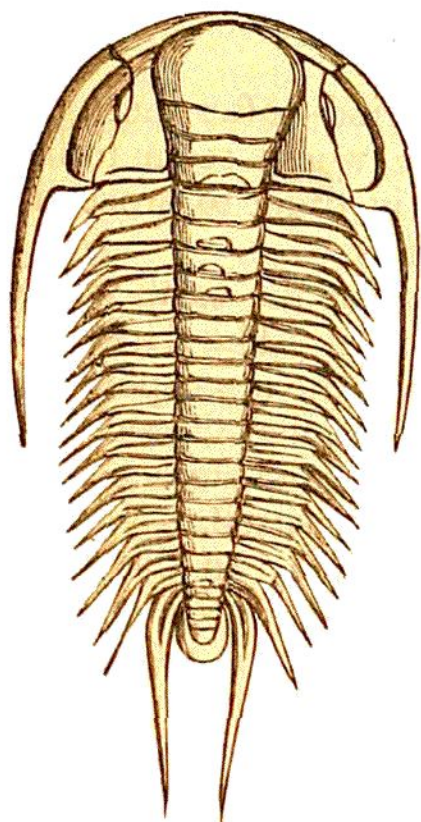


Fig. 17.—*Paradoxides Bohemicus*
—Bohemia.

We have stated that, during the earlier ages of our globe, the waters covered a great part of its surface; and it is in them that we find the first appearance of life. When the waters had become sufficiently cool to allow of the existence of organised beings, creation was developed, and advanced with great energy; for it manifested itself by the appearance of numerous and very different species of animals and plants.

One of the most ancient groups of organic remains are the Brachiopoda, a group of Mollusca, particularly typified by the genus *Lingula*, a species of which still exist in the present seas; the Trilobites (Fig. 17), a family of Crustaceans, especially characteristic of this period; then come *Productas*, *Terebratulæ*, and *Orthoceratites*—other genera of Mollusca. The Corals, which appeared at an early period, seem to have lived in all ages, and survive to the present day.

Contemporaneously with these animals, plants of inferior organisation have left their impressions upon the schists; these are Algæ (aquatic plants, Fig. 28). As the continents enlarged, plants of a higher type made their appearance—the Equisetaceæ, herbaceous Ferns, and other plants. These we shall have occasion to specify when noticing the periods which constitute the Primary Epoch, and which consists of the following periods: the Carboniferous, the Old Red Sandstone, and Devonian, the Silurian, and the Cambrian.