formed. We may feel confident that if any shells or corals had been originally inclosed in the sediments, they would have been destroyed. Especially would carbonate of lime have disappeared. Therefore, we are not certain that no chambered shells existed before the Cambrian. They may have existed. They may have been so formed and constituted as to show that the Cambrian species were *not* suddenly introduced, but made their appearance in such graduated succession as evolution implies. Here, at least, is a possibility which prevents us from feeling confident that the Cambrian Orthocer'atites were introduced by a sudden creation.

In these lowest Cambrian strata are, also, still other forms. Here we find *Gas'-ter-o-pods*—univalve shells coiled up. These, too, are well advanced from any humble beginning of Gasteropods—in case they began in a humble way. The same queries arise as in the case of chambered shells. Now, to recapitulate, we find in these lowest, fossil-bearing strata, remains of several types of animals appearing to our knowledge for the first time, but all well advanced beyond the lowest grades of the orders to which they belong. Here, in the very lowest strata, are Trilobites; *Lingula* and some related genera of Brachiopods, as well as *Or'-this*, quite a different genus, and perhaps Worms. In the Potsdam Sandstone are, also, Trilobites, as well as other crustaceans, *Grap'-to-lites* (branching plant-like animals with a horny skeleton), Sponges (of calcareous kind), *Lingula* and other Brachiopods; Pteropods; Gasteropods and *Orthoceras*. I enumerate them simply to make clear the fact that at the very dawn of the Cambrian Age numerous types well advanced in rank, suddenly appeared. You will notice, however, that several important types of animals were absent. Here were no corals, no crinoids, no Bryozoans, no Lamellibranchs.

So far we have confined our attention to the lowest group of the Cambrian rocks, composed of the Acadian or St. John formation and the Potsdam Sandstones. Next above the Potsdam is the Calciferous formation. It is very conspicuous along the bluffs of the Upper Mississippi, where it forms gen-