and slender. The incisors are separated, as in *Phascolotherium*,—a marsupial characteristic. The structural form of the jaw, according to Dr. Emmons's figure, shows some points of analogy with *Spalacotherium*, and some of difference.

Dr. Emmons has named the fossil *Dromatherium sylvestre*. He refers the strata in which it was entombed to the Permian period, chiefly because they contain the remains of Thecodont Saurians; but, as fossil species of this family of reptiles have been met with in the Upper Trias of Wirtemberg, we cannot lay much stress on this argument. This fossil may at least claim an antiquity equal to that of the Richmond coal-field, in Virginia, described in the text, at p. 330. If so, the *Dromatherium* would belong to the lower part of the jurassic series, older than the Stonesfield Slate; and therefore it must be regarded as one of the most ancient representatives of the mammalian class yet discovered.

UPPER TRIAS OF THE EASTERN ALPS (p. 333).

Recognition of a Marine equivalent of the Upper Trias in the Austrian Alps—True position of the St. Cassian and Hallstatt Beds—800 new species of triassic Mollusca and Radiata—Links thus supplied for connecting the Palæozoic and Neozoic faunas.

The true position in the series of certain Alpine rocks called "the St. Cassian beds" has long been a subject of doubt and discussion, but the researches of many eminent geologists, among others MM. Von Buch, E. de Beaumont, Murchison, and Sedgwick, and in Switzerland, MM. Escher and Merian, and more lately in Austria, MM. Von Hauer, Suess, and Hörnes, have shown that these rocks are unquestionably referable to the Keuper or Upper Trias. It has also been proved that the Hallstatt beds on the northern flanks of the Austrian Alps correspond in age with the St. Cassian beds on their southern declivity. By these discoveries we become acquainted, suddenly and unexpectedly, with a rich marine fauna belonging to a period previously believed to be very barren of organic remains, because in England, France, and Northern Germany, the Upper Trias is chiefly represented by beds of fresh or brackish water origin. Mr. Edward Suess, of Vienna, to whom we are indebted for several memoirs on the rocks in question, has favored me with the following summary of the order of succession of the Hallstatt beds in the Austrian Alps, which I had an opportunity, when travelling in the autumn of 1856, of verifying in company with Mr. Gümbel, of Munich.

The uppermost strata first enumerated immediately underlie the Lower Lias of the Swabian Jura. This lias is represented near Vienna by a brown limestone, containing Ammonites Bucklandi, A. Conybearii, &c.