

the Jurassic Cephalopods in several excellent monographs. He also followed Marcou's method of discovering the biological provinces of the Jurassic epoch. In Europe three provinces were distinguished by Neumayr—a Mediterranean (Alpine), a Central European, and a Russian or boreal province. These were supposed by Neumayr to correspond to three climatic zones which entirely girded the earth's surface, and were probably repeated in the southern hemisphere. In evidence of this theory Neumayr cited the fact that the Jurassic fossils from South America, New Zealand, South Australia, and South Africa strongly resemble those of the corresponding deposits in Swabia, France, and England, but differ completely from the Alpine type. Neumayr (1885) likewise gave sketch-maps of the Jurassic seas and continents, and pointed out the far wider distribution of the Upper Jurassic deposits than of the Liassic. From this he concluded that there had been an extensive Liassic continent which gradually became submerged by the advance of the Jurassic ocean.

According to the more recent investigations of Pompeckj (1897), however, the assumed non-occurrence of the Lias in the south-east of Europe, in Asia Minor, and Persia is rather due to the scanty information regarding the geological constitution of those lands than to an actual absence of the Liassic deposits in those lands; in his opinion, the significance of the Jurassic transgression has been over-estimated.

H. *Cretaceous System*.—The deposits which are now comprised under the name of the Cretaceous system were first studied in the Anglo-Parisian basin. But the examination of the rocks in this area provided no general systematic type, according to which the contemporaneous developments in other areas could readily be arranged. The remarkable differences in the local lithological and palæontological facies made it extremely difficult to recognise the contemporaneity of Cretaceous sediments, even in areas at no great distance from one another. Hence the geological knowledge of this system advanced slowly and in a fragmentary way. The sequence of rocks and organic types had to be independently elucidated in each locality. And it has been found impossible to determine any constant succession of faunal zones applicable over larger tracts of country, such as geologists have established for the