

caire de Valognes) between the Lower Lias and the Trias, which afterwards proved to be in part an equivalent of the Rhætic series.

While it was comparatively easy to determine the parallelism between the succession of Oolite deposits in the North of France and the succession in England, it was a much more difficult matter to compare the German and Swiss deposits of the same age with the English types. In 1795, when Humboldt travelled through Bavaria and Switzerland on his way to Upper Italy, he described a thick series of limestones "between the old Gypsum (of the Zechstein formation) and the newer sandstone (Bunter sandstone)," both in the Franconian Alps and the Swiss Jura Chain, and he applied the name of "Jura Limestone" to this massive development. Ami Boué in 1829 defined the stratigraphical position of the "Jura Limestone" more accurately; he limited the term to the limestone above the Lias and below the Wealden formation. In the same year Brongniart had selected the term *Terrain Jurassique* for the sedimentary deposits comprised within almost the same limits. Rengger, also in the same year, contributed a memoir on the "Aargau Jura," under which name he comprised all the rocks between the Bunter Sandstone and the Molasse—practically all the Mesozoic rocks and the older Tertiary. Rengger's section through the Aargau Jura shows that he never understood the repetition of strata caused by tectonic disturbances, and he assigned each recurrence of the typical limestones to a younger geological epoch.

Similar views were shared by Merian when he first wrote on the Swiss Jura mountains; but as his investigations continued, he explained the repetitions of certain strata as a result of the curvature of the crust. An important work by E. Thirria on the Jura of the Haute Saône showed that in the French Jura Chain the Lias was succeeded by a richly diversified complex of strata, which Thirria, in accordance with Brongniart's suggestion, called "Terrain Jurassique" and arranged in a number of sub-divisions. These were compared with the English sub-divisions on the basis of the identification of the fossils by Voltz. The literature, however, was not yet sufficient for an exact comparison of the fossils, and although the attempt was well planned, there were several palæontological blunders. The four chief divisions of Thirria were as follows:—