

The chief merit of Lehmann is his accurate description of the stratified rocks (*Flötzgebirge*). He distinguished thirty successive bands of rock in the stratified system of Ilfeld and Mansfeld, and set forth the geological structure of that district in an accompanying series of diagrams and sections. Many of the terms in his description of the Thuringian deposits were adopted by him from the miners, and have been retained in geological literature; for example, *Zechstein* or mine-stone, corresponding to the Magnesian Limestone and shales or Upper Dyassic group in England; and *rothes Todtliedendes* (*Rothliegende*) or red underlyer, the unproductive basement beds below the ore-bearing, and the equivalent of the Lower Dyassic.

What Lehmann accomplished for the Permian rocks of Thuringia was accomplished by one of his contemporaries, Dr. Füchsel,¹ for the Triassic series in the same district. In his Latin work, Füchsel defined for the first time the scientific use of the terms *Stratum* (Schicht), *Situs* (Lager), and *Series montana* (Formation). He used the term "formation" to signify a succession of strata, which have been formed immediately after one another under similar conditions, and represent one epoch in the history of the earth; and this is the significance which has continued to be attached to the term in geology.

Füchsel recognised nine formations in Thuringia from the oldest or fundamental rocks to the Muschelkalk:—

9. Muschelkalk, or Upper Limestone series (Middle Trias of later authors);
8. The Sandstone series (now Bunter sandstones or Lower Trias);
7. Granular Limestone and dolomitic marls (now *Zechstein* dolomite);
6. The Metalliferous series (*Zechstein*) and copper slate (*Kupferschiefer*);
5. White rocks, with interbedded sand and clay;
4. Red rocks, with interbedded red marble;

¹ G. Christian Füchsel (1722-73) studied in Jena and Leipzig, took the degree of Doctor at Erfurt, and passed the great portion of his life as a physician in Rudolstadt. The results of his investigations are published in two works; the chief work appeared at Erfurt in 1762: "Historia terræ et maris ex historia Thuringiæ permontium descriptionem erecta" (*Acta Acad. elect. Moguntinæ*). The second work was published independently, and is now very scarce, *Entwurf zur ältesten Erd und Menschen Geschichte*, 1773.