

- Wellenkalk - 2. Lower Alpine limestone, dolomite, and rauchwacke, with *Terebratula vulgaris*, *Myophoria vulgaris*, etc.
- Bunter - - 1. Red sandstone, Werfen shales with *Monotis Clarai*, etc.

Emmrich enumerated a larger number of fossils in the *Avicula contorta* zone which had hitherto been referred to the Liassic group, and in opposition to the views of Buch, Murchison, Lill von Lilienbach, and Schafhäütl, he pointed out the strong affinities exhibited both by the *Avicula* beds and the *Lithodendron* limestone with the St. Cassian series.

In the Vorarlberg, Escher von der Linth, partially in collaboration with Merian, made the following sub-divisions of the Wengen-Cassian group in the Triassic series:—

St. Cassian Group.	{	Megalodon dolomite ("Dachsteinkalk" or "Main dolomite").
		Upper St. Cassian strata with <i>Gervillia inflata</i> , <i>Cardium Rheticum</i> , etc.
		Dolomite or middle St. Cassian ("Esino Kalk").
		Black marls with <i>Bactryllium Schmidtii</i> and limestone with <i>Halobia Lommeli</i> (lower St. Cassian) plant sandstones with <i>Equisetum</i> , <i>Calamites</i> , etc.

In this sub-division the upper St. Cassian strata of Escher correspond to the "*Gervillia*" strata of Emmrich; and this confusion of the St. Cassian marls with the Kössen marls proved a frequent source of error in after years, and also led to a consequent misinterpretation of the age of the limestone or dolomite masses underlying the fossiliferous marls or reposing upon them. Escher's *Halobia Lommeli* sub-division is identical with the "Wengen" strata of Emmrich's South Tyrol section.

Important researches were made in the Trias of Lombardy by Curioni (1855). He confirmed Escher's sub-divisions, showed that the *Halobia Lommeli* strata and plant sandstones rested upon Muschelkalk, and gave careful details regarding the fossils and superposition of the lower and middle Triassic