

Wöhrmann had previously shown that in all the places where former writers believed Lower Cardita beds to be present, they were Upper Cardita beds which had been faulted to a position below the Wetterstein limestone as a result of crust-movements.

Wöhrmann devoted himself for several years to a thorough and comprehensive systematic research of all the "Cardita" and "Raibl" deposits in the Northern Alps and worked out their stratigraphical relations, both by means of geological sections and of comparative palæontological studies. He concluded by sub-dividing "Raibl" deposits in three distinct palæontological groups, the lower and middle containing many species identical with the Wengen-Cassian forms, while the upper agrees with the Torer or upper horizons of the fossiliferous series near Raibl. Wöhrmann included the rauchwacke and gypsum beds in Vorarlberg, the Opponitz limestone in Austria, the Torer strata and Megalodon dolomite in the Southern Alps with the *Upper Raibl* horizons; the Lunz and Reingraben strata, red Schlern plateau strata, and the shaly limestone containing *Myophoria Kefersteini* with the *Middle Raibl*; the shales with *Trachyceras Aon* and *Halobia rugosa* with the *Lower Raibl* division.

Wöhrmann has thus combined the whole palæontological sequence of Wengen-Cassian and Raibl deposits under the one name of "Raibl deposits," and used the name in the wide sense in which it was originally applied at Raibl by Fötterle, Suess, and Stur (*ante*, p. 472). But as the St. Cassian fossils were discovered and described before those of the Raibl strata, the adoption of the latter name generally for the group in the Alps seems scarcely legitimate. The Alpine Raibl deposits are regarded by Wöhrmann as the equivalent of the extra-Alpine Lettenkohle group, while he holds the Wetterstein limestone and its equivalents to be the equivalents of the uppermost horizons of German Muschelkalk.

With the exception of Stur, the older Alpine geologists had placed the Hallstatt limestone of Salzkammergut as an equivalent of the Wetterstein limestone in Bavaria and North Tyrol in the lowest division of the Upper Trias. The second edition of Hauer's Geology of Austria-Hungary still gave this interpretation of the Hallstatt limestone, and separated the Kössen beds, Dachstein limestone, and Main Dolomite from the Triassic system, regarding them as an independent