of Trigonia costata, a characteristic form of the German Roth, serves to mark the relation of the Werfen beds to the Triassic series of the German area.

2. Muschelkalk.—It is above the position of the Werfen beds that the Alpine Trias begins to manifest great lithological differences, not only in the two provinces on the northern and southern sides of the Alps, but even within the confines of each province. The general character of these differences is expressed in the foregoing table. Yet, with some notable exceptions, the palæontological zones can be distinguished. The lower Muschelkalk of the eastern Alps consists in its inferior portion of sedimentary deposits which are largely argillaceous, while the upper part is composed of limestones and dolomites arranged in lenticular reef-like masses. The lower argillaceous division varies in its palæontological character. Mojsisovics distinguishes three facies, the lowest in which lamellibranchs predominate (Recoaro), and which shows a close lithological and palæontologial relation to the German Muschelkalk, followed by one with brachiopods and land-plants, and that by a third with cephalopods (Dont, Val Inferna and Brags). The calcareous group sometimes resembles in lithological character the German Wellenkalk, but in certain places it assumes the aspect of reefs. Among the most important fossils of the Alpine Lower Muschelkalk some are common to this stage in Germany, such as Spiriferina Mentzeli, S. hirsuta, Rhynchonella securtata, Terebratula vulgaris, T. angusta, Myophoria vulgaris, Pecten discites, Encrinus gracilis, Ceratites trinodosus. But there remains a large number of peculiar forms, especially the abundant ammonites (Ptychites, Trachyceras, numerous species, Lytoceras). The Upper Muschelkalk is generally a dark gray to black limestone, but sometimes (Salzkammergut) is red and like a marble. Among the typical fossils are Daonella Sturi, D. parthanensis, Orthoceras campanile, Nautilus Pichleri, Ptychites gibbus, Arcestes Bramantei, Ægoceras megalodiscus, Ceratites (Trachyceras) trinodosus, and other genera.

3. Noric Stage.—It was at the close of the deposition of the Alpine Muschelkalk and the beginning of the Noric stage that the two great biological provinces above referred to were finally established. The general grouping of the formations in each area and the striking difference they present even within the same area are best understood from the inspection of such a table as that given above. On the southern side of the Alps two groups in this stage have