

their work of surveying, palæontologists found matter for discussion in the faunal affinities of the *Avicula contorta* zone—whether the fossils indicated nearer relationship to the Keuper fossils below or to the Liassic fossils above them.

Alberti and Plieninger, the two leading Swabian authorities, thought them distinctly Triassic in character, and included the *Avicula contorta* zone or Bone-bed as the uppermost member of the Keuper; Quenstedt, after some hesitation, distinguished the fauna as an intermediate assemblage occurring in passage-beds and premonitory of the Lias. Oppel (1856), Sedgwick, Murchison, and the great majority of the Austrian geologists at that time assigned the *Avicula contorta* zone to the Lias; Emmrich, Merian, Studer, and Escher von der Linth placed it in Upper Trias. In France, geologists had long been familiar with the fossiliferous deposits between Keuper and Lias, as these are well exposed over a considerable tract of country on the east and south of the Central Plateau and in Lothringen. Leymerie had described them in 1840 under the name of *Infralias*, but many of the later authors grouped them with Trias. The same difference of opinion reigned in Great Britain; Brodie and Strickland (1842) regarded the passage series with the bone-bed as Liassic, whereas Agassiz (1844) and Buckmann, on the basis of the Fish and Plant remains, declared the series to be Triassic in character.

Oppel and Suess gave in their first memoir no expression of opinion regarding the Triassic or Liassic age of the beds; the *relative* stratigraphical position sufficed for their immediate purpose. But in 1859 Oppel contributed a special memoir, and stated that after tracing the extra-Alpine "Contorta-zone" into Luxembourg and France, he had come to the conclusion that the limiting-line between Trias and Jura should be *above* the "Contorta" strata and *below* the zone of *Ammonites planorbis*. Two years later this view was supported by Gümbel in his *Geognostic Description of the Bavarian Alps* (1861). Gümbel proposed to group the Kössen strata and the Dachstein limestone together under the name of *Rhætic Group*, from their development in the Rhætikon district of the Alps, and to regard this group as the uppermost division of the Alpine Keuper. At the present day most of the German and Austrian geologists follow Gümbel's suggestion; but in France the majority of the geologists retain the position and the name "*Infralias*," which was suggested by