

German "Copper Slate." The uppermost member in the Alpine succession is a bituminous marine limestone known as "Bellerophonkalk," from the large number of Bellerophon species contained in it. The fauna has a fairly diversified pelagic character, but G. Stache in his memoir on the Bellerophon Limestone (*Jahrb. k. k. geol. Reichs.*, 1887-88) showed that there were several species common to it and to the Zechstein of the German area.

A striking facies of the youngest Palæozoic and the oldest Mesozoic deposits occurs in Central and Southern India. Instead of the marine strata present in the Punjab, the deposits south of the Narbada river are of fresh-water origin, and comprise Conglomerates, Sandstones, and Carbonaceous shales. They were for the first time examined in detail near Talchir by the brothers Blanford (1856) and Theobald, and these geologists sub-divided the deposits into four palæontological groups (Nagpore, Talchir, Damuda, and Mahedewa groups). The lower divisions were placed in the Upper Permian formation, and the upper divisions were assigned to the lower Trias. The Talchir group consists of conglomerates with very large boulders and striated surfaces, and W. T. Blanford argued from this and other evidences that the boulders had been transported to their present position by means of icebergs, and that consequently there must have been an ice age during the latest Permian eras.

The whole complex of Permo-Triassic fresh-water strata, about 6000-7000 metres in thickness, received the name of *Gondwana System* from Medlicott, and according to the latest investigations, the lower members, including the Talchir and Damuda groups, are of Permian age, the "Panchet Series" is probably Triassic wholly or in part, and the upper horizons apparently represent a considerable portion of the Jurassic deposits. The lower members are especially subject to local variations, and the Talchir conglomerates repose unconformably upon different horizons of the older rocks.

The Kahabari, Damuda, and Panchet groups present intercalated coal-seams accompanied by fossil plants, amongst which the genera *Glossopteris* and *Gangamopteris* abound. The rich flora and the occurrence of remains of Vertebrates (*Stegcephali* and *Anomodontia*, cf. p. 417) give a distinctive impress to those groups, and render it difficult to find a comparison with European developments. Nevertheless, the com-