

dent snow-fields.³⁴ The glacier of the Rhone and its tributaries at the time of the maximum glaciation was so gigantic as to fill up the hollow of the Lake of Geneva and the vast plain between the Bernese Oberland and the Jura. It crossed the Jura and advanced to near Besançon. It swept down the valley below Geneva, and then, joined by its tributaries, spread out over the lower hills and plains until the whole region from Bourg to Grenoble was buried under ice. The evidence of this great extension is furnished by rock-striæ, transported blocks and moraine stuff.³⁵

Belgium.—The Quaternary deposits of this country, like those of northern France, belong to a former condition of the present river-basins. In the higher tracts, they are confined to the valleys, but over the plains they spread as more or less continuous sheets. Thus, in the valley of the Meuse, the gravel-terraces of older diluvium on either side bear witness only to transport within the drainage-basin of the river, though fragments of the rocks of the far Vosges may be detected in them. The gravels are stratified, and are generally accompanied by an upper sandy clay. In middle Belgium, the lower diluvial gravels are covered by a yellow loam (Hesbayan), probably a continuation of the German loess, with numerous terrestrial shells (*Succinea oblonga*, *Pupa muscorum*, *Helix hispida*). In lower Belgium, this loam is replaced by the Campinian sands, which have been observed lying upon it. The Belgian caverns and some parts of the diluvium have yielded a large number of mammalian remains, among which there is the same commingling of types from cold and from warm latitudes so observable in the Pleistocene beds of England and France. Thus the Arctic reindeer and glutton are found with the Alpine chamois and marmot, and with the lion and grizzly bear.

The Alps.³⁶—Reference has already been made to the vast extension of the Alpine glaciers during the Ice Age. Evi-

³⁴ Falsan and Chantre, "Anciens Glaciers," ii. p. 384.

³⁵ Falsan and Chantre, op. cit.

³⁶ Besides the works of Falsan and Chantre, Penck and Partsch, cited on p. 1679, the student may consult Morlot, Bib. Univ. 1855; Bull. Soc. Vaud. Sci. Nat. 1858, 1860; Heer, "Urwelt der Schweiz"; the map of the ancient glaciers of the north side of the Swiss Alps, published in four sheets by A. Favre, Geneva, 1884; C. W. Gümbel, Sitzb. Akad. Wien, 1872; R. Lepsius, "Das westliche Süd-Tirol," Berlin, 1878; A. Heim, "Handbuch der Gletscherkunde," 1885; Baltzer, Mittheil. Naturf. Ges. Berne, 1887; Renevier, Bull. Soc. Helv. 1887; A. Böhm, Jahrb. k. k. Geol. Reichsanst. xxxv. 1885, p. 429.