

Independently of the Americans, the writings of Sir Andrew Ramsay, and of Sir Archibald Geikie and Professor James Geikie in Scotland, gave convincing evidence of the work of ice and water upon the rocks. Rüttimeyer contributed in Switzerland a brilliant paper on the formation of valleys, while Desor elucidated the leading features of desert and moraine landscapes, and his teaching found able followers in Heim, Baltzer, Fellenberg, Du Pasquier, and Penck. De Lapparent and De Margerie in France, Torell and Helland in Scandinavia, Muschketow and Lewakowsky in Russia, are the leaders in this direction of study.

In 1869, Oscar Peschel had collected the principles of physiological geology into a systematic form, and thus given the first incentive towards converting the study of this subject into an independent scientific discipline. Instead of the earlier formal grouping of the surface-forms, the treatment of the subject now betokened an effort to group together all types of form which have a similar genetic history. What Peschel tried to initiate in this direction was fully realised by Baron von Richthofen in his book, *Führer für Forschungsreisende* (Berlin, 1886). This work, designed primarily as a guide in the methods of observation, is based for the most part upon the personal observations of the author during many years of travel in the Alps, Carpathians, North America, and China, and has become in Germany the standard work for the systematic treatment of surface-forms.

In 1894, Penck accomplished the difficult task of arranging our present knowledge of surface-configuration upon the basis of leading genetic principles. In his *Morphologie der Erdoberfläche*, Penck has presented the chief results of the special literature of physiography in clear, concise form. A comparison of Richthofen's *Führer* and Penck's *Morphologie* with the older works on orography and hydrography, shows very plainly the great improvement that has been effected by the new methods of study in the domain of geography.