"The materials composing pelagic deposits are not directly derived from the disintegration of the continents and other land-surfaces. They are largely made up of the shells and skeletons of marine organisms secreted in the surface-waters of the ocean, consisting either of carbonate of lime, such as pelagic Molluscs, pelagic Foraminifera, and pelagic Algæ, or of silica, such as Diatoms and Radiolarians. The inorganic constituents of the pelagic deposits are for the most part derived from the attrition of floating pumice, from the disintegration of water-logged pumice, from showers of volcanic ashes, and from the *débris* ejected from submarine volcanoes, together with the products of their decomposition." (Sir John Murray, Brit. Assoc., 1899.)

Throughout the earlier parts of the nineteenth century much labour was expended on the description of different parts of the continents, but the treatment was too formal to advance the conceptions of the connection between the physiography and geology of the earth. A desire gradually made itself felt, not only to describe, to measure, and to compare the actual forms and to follow their distribution, but also to explain their origin and development; and the two sister studies more fully recognised their community of aim. The physical exposition of the Swiss Jura mountains by Thurmann, in 1832, gave a strong impulse to the new direction of thought in Europe, but it was in the wide plateaux of America that the first signal successes of physiographical geology were won. The brilliant works of Dana and Leslie were followed by those of Powell, Dutton, Gilbert, and other pioneer geologists in the Far West; by their vivid portrayal of the work of subaerial denudation the American writings roused the intellectual life of the middle of the century to new conceptions on a grand scale.

The gigantic erosion forms in the Bad Lands, the configuration of the Rocky Mountains and of the plateaux lands in Arizona, Colorado, and Mexico, the wonders of the Yellowstone Park and California, called forth a new and rich literature, which demonstrated in the most convincing way that the surface-forms of those regions are mainly the result of the erosive activity of water.

Davis, MacGee, Chamberlin, and others have worked along the same lines in the east of North America and the middle States, where ice rather than water takes the first rank as the agent which sculptured the prominent surface-forms.