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at part, the erman minimproved proposed a but sober "per color, r. Fitton's is method zerland, a America. As early as 1810 Cuvier and Brongniart, in their celebrated "Carte Géognostique des environs de Paris," used even tints without a "band of deeper color along the line of contact."

William Maclure, who, though a pupil of Werner, was also well acquainted with the French geological school, colored his first geological map of the United States in 1809 with even tiuts. Since 1832 the German school as well as the English has adopted even tiuts.

Curiously enough the first edition of his geological map of the United States appeared without the name of Maclure, and is sometimes credited to Samuel G. Lewis, the draftsman who compiled the geographical map on which Maclure put his geological classification and colors. This mistake and the use of a drawing by Lewis were due "to the absence (from America) of the author of "Observations on the Geology of the United States, explanatory of a Geological Map," lead before the American Philosophical Society at Philadelphia January 20, 1809.

From 1809 to 1842 all the geological maps published on America were executed in a manner which leaves much to be desired in respect to coloring, and still more in regard to the classification of the rocks. It is only after the appearance of the "Geological Map of the State of New York" in 1842 that maps really possess great interest either from the value of their classifications or from the mechanical execution.

The same year a geological map of great importance, both on account of the difficulties presented by the region explored, the most elevated of the Andes, and of its central position in South America, was published by Alcide d'Orbigny under the title "Carte Géologique de la République de Bolivia." From that time nearly all the great geological and paleontological horizons of the New World were accepted as established, though geologists hesitated for a few years about the acceptance of the existence of several systems of stratified rocks, and also about the identification of certain paleontological horizons.

Between 1842 and 1862 there appeared a great number of geological maps of regions limited either to single countries or parts of countries, or even to a single county, or a portion of one, as well as several attempts at general maps of North America, of South America, and even of both Americas together. However, all of them have an essentially temporary character, and are geological reconnaissances. Nothing truly studied in detail and with eare had then appeared. This was owing to several causes. First the total absence of good topographical maps, and often even the absence of any kind of a map, geologists being obliged to make them themselves, in order to draw and color the systems of rocks. Then the vast surfaces to be studied, the great distances to be traversed before reaching the ground to be explored, the difficult and primitive modes of transportation before the construction of lines of railroads, the wilderness and the deserts of most central continental regions, and finally the unhealthy climate of the tropics and the banks of the great rivers. All these obstacles have conspired to render