

district could not be arranged according to the Wernerian plan which there completely broke down. Von Buch found a mass of granite lying among fossiliferous limestones which were manifestly metamorphosed, and were pierced by veins of granite, porphyry, and syenite. Such observations did not lead him, any more than those in Central France, to a formal renunciation of Wernerianism. But they enabled him to take a wide and independent view of Nature, and gradually to emancipate himself from the narrower views in which he had been trained at Freiberg.¹

Von Buch's memorable investigation of the proofs of the recent uprising of Scandinavia contributed still further to expand his geological horizon. When he announced that the whole of the continent of Sweden from Frederikshald to Abo is now slowly rising above the sea, he did as much as any Vulcanist of his day in support of the theory of the earth promulgated by Hutton.

A further emancipation from the tenets of Freiberg was displayed by a series of papers on the mountain-system of Germany, wherein Von Buch gave the first clear description of the geological structure of Central Europe. He declared that the more elevated mountains had never been covered by the sea, as Werner had taught, but were produced by successive ruptures and uplifts of the terrestrial crust. In 1824 he produced a geological map of the whole of Germany in forty-two sheets, the first large map of its kind to illustrate a great area of the European continent, and a signal monument of its author's unwearied research

¹ See his "Reise nach Norwegen und Lappland," *Gesammelte Schriften*, vol. ii. p. 109.