

to Vesuvius. Although during these travels he began to entertain serious doubts about the correctness of Werner's theory of the origin of basalt, he could not convince himself that it was untenable.

After a visit to Paris, Von Buch returned to Berlin in 1799, and was there commissioned to investigate the occurrence of mineral contents in Canton Neuchâtel, which at that time was under Prussian government. Neuchâtel, from which ready access was afforded into the Jura mountains and into the Alps, now became his headquarters. Every observation was carefully entered in his maps, and a number of scientific papers flowed from his ready and graceful pen.

A visit to Auvergne in 1802, and a study of the basalt and trachyte in that area, still further shattered Von Buch's faith in Neptunian doctrines. In 1805 he was again at Naples, and in the company of Alexander von Humboldt and Gay Lussac he had the good fortune to witness Vesuvius in active eruption.

Having explored the most interesting parts in Southern Europe, Von Buch then travelled for two years, 1806-8, in Scandinavia and Lapland. The published account of his travels, *Through Norway and Lapland*, established his fame as a gifted writer and an acute observer. Little had hitherto been known about the climatology and geology of these high European latitudes, and Von Buch contributed data of far-reaching significance. For example, he pointed out that although the rocks in these regions follow the same general scheme of succession as Werner had drawn up, the granite could by no means be regarded as the oldest rock-formation, since he had observed it near Christiania in a position *above* the Transitional Limestone. Again, he showed on mineralogical evidence that many of the erratic blocks scattered over the North German plains must have come from Scandinavia.

Von Buch also examined the raised beaches and terraces of Scandinavia, and came to the conclusion that the Swedish coast was slowly rising above the level of the sea. In this he agreed with the opinion that had been formed by Playfair with regard to the raised beaches of Scotland. On the other hand, Linnæus and Celsius had attributed the fluctuations on the Scandinavian coasts to a sinking of the water-level round the shores.

In 1809 Von Buch was chiefly engaged in mineralogical and geological researches in the Alps. Meanwhile, great