

von Buch and Alexander von Humboldt. During the winter spent by the two friends in Salzburg, they made numerous tours into the Salzkammergut and Gosau Valley. Von Buch's account of the geognostic and physical relations in that locality is very pleasant reading; but, biassed as he was by Werner's theories, Von Buch tried to explain the disturbances of the strata by local collapse, and by the shifting of the centre of gravity in the rocks. The beautiful "Königsee" near Berchtesgaden, and the Lake of Hallstadt, were both regarded as local basins of inthrow, and the deep Alpine valleys were attributed to river erosion. The whole massive development of limestone in the higher ranges of the Salzkammergut was taken to be the equivalent in age of the Thuringian "Zechstein" (Upper Dyas). The occurrence of fossils at Hallstadt and Gosau, and other now famous localities, was repeatedly mentioned by Von Buch, but the fossils themselves were not used in any way to help to determine the age of the rocks.

In a separate publication Von Buch drew a comparison between the geological succession observed by himself across the Brenner Pass, and that which had been described by De Saussure for the Mount Cenis Pass. Although the idea was good, the rocks and the stratigraphy in these two distant Passes have too little in common to disclose any broad principles of Alpine structure, and the results obtained by Von Buch in this respect were confused and unsatisfactory.

Some general facts were, however, brought into prominence. In this work Von Buch demonstrated the absence of porphyry at Mount Cenis, as well as in the whole Northern Alps, in strong contrast to the enormous development of this rock south of the Brenner Pass; he compared the northern and southern zones of the Alps with one another geologically; showed the relationship of the Jura mountains, to the Alps and he drew attention to the lithological differences in the rocks, and their influence on the scenic features. In later years Von Buch wrote a few short papers on the Hinterrhein district (1809) and on the Bernina Massive (1814).

One of the most richly endowed of Alpine students was the Zürich geologist, Hans Conrad Escher (1767-1823). In 1796 Escher published a geological survey of the Swiss Alps, and afterwards a series of geological sections from Zürich to the St. Gothard Pass. He also contributed several smaller