

*lavas* and *trap-porphyr* (trachyte) in detail; while Haüy introduced the names of *pegmatite*, *diorite*, *trachyte*, *aphanite*, *euphotide*, *leptinite*.

Brongniart attempted a complete classification of rocks in 1813, and introduced the terms *diabase*, *melaphyre*, *psammite*, etc. Fleurien de Bellevue and Cordier made use of the microscope for the identification of the components in powdered specimens, but with little success.

The advances made in these early decades practically represented the progress that could be attained by the use of Werner's method. A new era began for this branch of geology when, in later years, the microscope was applied to the examination of thin rock-sections by transmitted light.

Very great interest centred round the origin of the massive crystalline and schistose rocks, and widely divergent opinions were held. The Neptunists thought that all rocks, with the exception of products from active volcanoes, were of aqueous origin. At first the Neptunists and Volcanists disputed only the origin of basalt, which Tobern Bergman, and afterwards Werner and his school, regarded as a sedimentary rock. Almost all French geologists had studied basalt in Auvergne, Velay, Vivarais, or in Ireland, and adopted the view of Desmarest and Faujas de Saint-Fond, that basalt was a volcanic product.

In Germany, Werner's personal influence kept alive Neptunian doctrines even against sharp attacks like those of Voigt (p. 83). Not a few of the German geologists began to assume an intermediate position. Beroldingen tried to unite the opposite opinions by suggesting that basalt owed its origin to volcanism, but its form to water. The basaltic magma had solidified on the bed of the ocean, and its pillared, sheet-like, spheroidal, or crystalline form had been developed under the influence of water and hot vapours. In favour of this view, Beroldingen cited the local occurrence of Ammonites, Gryphites, and Belemnites in basalt. This observation was, however, afterwards found to have been erroneous. Yet in the course of his discussion, Beroldingen gave expression to many valuable remarks about volcanic ejecta and the disintegrating changes undergone by volcanic rocks. C. W. Nose, an observer who greatly advanced the geology of the Lower Rhine provinces of Prussia, was of the opinion that basalt and porphyry originated as sedimentary deposits, but were