and methodical investigation of the earth's crust may be said to have begun towards the end of the eighteenth century. The careful sections of the Thuringian district prepared by Lehmann and Füchsel initiated a new direction in crust-physics, and fore-shadowed the special work undertaken by stratigraphical research in the present day,—to find out the actual distribution of the rocks in the ground so far as they are at present exposed to view, and if they do not occur in undisturbed horizontal succession, to determine what displacements they have suffered, and reconstruct as nearly as possible a true mental picture of the sequence of events, the original distribution of the various sediments in time and place, the subsequent movements secular or paroxysmal, and the character of the resultant deformation of rock-particles and rock-masses.

Werner and his scholars contributed to field research many of its precise terms and methods. They examined the rocks with respect to strike and dip; alternations of strata; mutual stratigraphical relations in vertical and horizontal directions; the displacements effected along fault-lines; upheaval, curvature, bending and folding of rocks. The terminology which they applied very often betrays the close connection which existed between the mining industry and the beginnings of stratigraphy. The mines, the minerals, and any evidences of rock-displacement discovered during the mining operations were the sources of knowledge from which Werner taught, and as his scholars gradually extended their field of vision, and the glance of a Humboldt or a Leopold von Buch became world-wide, the early impressions and familiar terms of student days were grafted into the more ambitious conceptions and generalisations with which such men enriched the systematic study of the earth's crust. Many mining terms have thus been adopted into geological literature, although the original significance has been in some cases considerably modified.

Pallas and De Saussure gave the first more exact accounts of the structure of mountain-systems, and early in the nineteenth century important advances were made by the investigations of Ebel, Studer, Escher, Élie de Beaumont, and others in the Alps, those of Voigt and Heim in the Thuringian Forest, of Merian and Thurmann in the Swiss Jura Chain, of De la Beche in Cornwall and Devonshire, of Sedgwick and Murchison in Wales, and of the brothers Rogers in Pennsylvania. The