

proposed the term *metamorphic rock* for the crystalline schists, which he regarded as normal deposits of sand, clay, or limestone, subsequently altered in structure by contact with hot eruptive material and by subterranean heat. Thus Lyell in the question of rock-metamorphism at first preserved precisely the attitude of Hutton, but in later years he ascribed the processes of crystallisation partially to mechanical causes, more especially to strong pressure.

The appearance of Lyell's *Principles* was epoch-making. Since Werner, no geologist had in such a high degree influenced and re-modelled the views of geological science. Although, unlike Werner, Lyell did not impart his ideas directly as a teacher, he was personally on terms of intimate acquaintance with all the greatest of his contemporaries, and no man could better appreciate the value of the latent currents in scientific thought, nor more skilfully render them intelligible to others.

Lyell was a master of clear exposition; his writings appealed to a wide public, attracting many to give more serious attention to the study of geology, and establishing it as one of the most popular branches of science.

Throughout his life he was untiring in his denunciation of any remnants of the unfounded hypotheses promulgated in earlier centuries, and he waged a constant combat against the unscientific fabric of the Catastrophal Theory. He taught the Uniformitarian doctrine of Hutton and Playfair. The earth, in Lyell's opinion, is the scene of never-ceasing change; but while on the one hand he refused to accept the idea of universal catastrophes, on the other he saw no direct evidence of progress and development in the history of the earth. The Uniformitarian doctrine recognises neither beginning nor end in the earth's history, and opposes just as strongly as the Catastrophal Theory the conception of a progressive evolution.

Lyell's views were welcomed with enthusiasm in Great Britain, and have there had a lasting influence upon the methods and tendencies of geological research. In Germany also, where Von Hoff had paved the way, Lyell's works attained immediate celebrity, and were made widely known by several translations. But the personal influence of Von Humboldt and Leopold von Buch was still too powerful to allow a rapid acceptance of the Uniformitarian doctrine.