## James Hutton

Illustrations. After Hutton's death his friend Playfair published in 1802 his classical Illustrations of the Huttonian Theory. We are thus in possession of ample information of the theoretical views adopted by Hutton, and of the facts on which he based them. Before considering these, however, it may be convenient to follow the recorded incidents of his quiet and uneventful life, that we may the better understand the manner in which he worked, and the nature of the material by which he tested and supported his conclusions.

It was one of the fundamental doctrines of Hutton's system that the internal heat of the globe has in past time shown its vigour by the intrusion of large masses of molten material into the crust. He found many examples of these operations on a small scale in the neighbourhood of Edinburgh and in the lowlands of Scotland. But he conceived that the same effects had been produced in a far more colossal manner by the protusion of large bodies of granite. This rock, which Werner had so dogmatically affirmed to be the earliest chemical precipitate from his primeval ocean, was surmised by Hutton to be of igneous origin, and he believed that, if its junctions with the surrounding strata were examined, they would be found to furnish proofs of the correctness of his inference. The question could be easily tested in Scotland, where, both in the Highlands and among the Southern Uplands, large bodies of granite had long been known to form important groups of mountains. Accordingly, during a series of years, Hutton undertook a number of excursions into various parts of his native country, and returned from each of them laden with fresh illus-