

crust. We have seen that the idea was already supplied to him by Lehmann and Fuchsels, and it is now evident that, by working into it his notion of universal aqueous precipitates, he introduced an element of hypothesis which threw back for some years the progress of sound geology. What was true in the doctrine was borrowed from his predecessors, what was his own consisted largely of unwarranted assumption. He undoubtedly did enormous service by his precise definitions and descriptions of rocks, and by dwelling on the fact that there was an observable order of succession among them, even though he mistook this order in some important particulars, and entirely misinterpreted its meaning and history. The full significance of geological succession was not understood until it was worked out independently in England and France by a rigid collection of facts and on a palæontological basis, as I shall describe in a later chapter.

Werner's writings are so few and slight that his disciples and admirers continually expressed their sorrow that he would leave so little behind him save his world-wide fame. His natural dislike of the pen increased with his years. He would discourse eloquently on many subjects, but could never bring himself to write fully on any one. Usually when he went to lecture he would retire for a quarter of an hour to arrange his ideas, and when he appeared before his audience he brought with him only some scraps of paper, with a few words scribbled on them. He never wrote a single lecture. If this abstinence from the use of the pen saved him from scientific controversy