

In 1791 he observed the agreement of the red marl and the Lias near Bath with the corresponding strata in Gloucestershire, and also their unconformable position upon the Carboniferous formation. For twenty-five years William Smith continued his investigations in all parts of England; he entered his observations in coloured geological maps, and compiled them from time to time in the form of tables or as explanatory notes to his maps. He also carried out a scheme of arranging a collection of fossils according to the succession of strata; his own collection was acquired by the British Museum, and is still exhibited there. After his long period of field observations, William Smith came to the conclusion that one and the same succession of strata stretched through England from the south coast to the east, that each individual horizon could be recognised by its particular fossils, that certain forms reappear in the same beds in the different localities, and that each fossil species belongs to a definite horizon of rock.

Like his famous contemporary Werner, William Smith also had a disinclination for writing; on the other hand, he was always willing to communicate the results of his investigations orally. It is told of him how in the year 1799 he made the acquaintance of the Rev. B. Richardson, in Farley, who owned a large collection of fossils from the neighbourhood of Bath. To Richardson's astonishment, Smith knew better than the owner himself where the individual species had been found and in which particular horizon of rock.

Then a dinner was arranged, at which William Smith met another enthusiastic fossil collector, Rev. W. Townsend, and William Smith consented to dictate a table of the British strata from the Carboniferous to the Cretaceous formation. The table of strata was rapidly copied and distributed among geologists. The original manuscript, written by Richardson and dictated by Smith, is in the possession of the Geological Society in London. In this first table of Smith's the successive strata were indicated by numbers.

But Smith was not content with the determination of a chronological succession of strata; he traced their surface outcrops, and thus built up the material for his maps and sections. He laid before the Board of Agriculture a series of memoranda and geological maps which were published between 1794 and 1821 in the form of