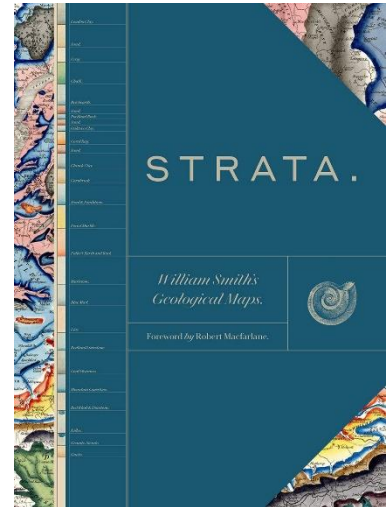


Strata. William Smith's Geological Maps.

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An extraordinary map entitled *A Delineation of the Strata of England and Wales, With Part of Scotland* was published in 1815 in London, England. This pioneering map, drawn at a scale of 5 miles to the inch, was so enormous at 8 feet 6 high and 6 feet wide, that it had to be printed as fifteen separate sheets. It was remarkable because, not only was it the first detailed geological map of England and Wales, it was also the first of its kind to indicate the succession and underground distribution of the sedimentary strata below the earth's surface. The map was the culmination of fifteen years of data collection by a man who had single-handedly gathered geological information by travelling up to 10,000 miles a year throughout the British landscape in search of rock outcrops while employed as a surveyor-for-hire. The name of the man behind the map was William 'Strata' Smith (1769-1839), now recognized as the father of English geology. *Strata* tells his life's story while also providing the first complete presentation of his work in rich detail.



[A Delineation of the Strata of England and Wales, With Part of Scotland](#) (1815). © Oxford University Museum of Natural History

The Foreword and Introduction of *Strata* provide key details about William Smith's career arc from apprentice surveyor to decorated geologist, his major achievements, contributions to geological mapping, and a handy timeline of life events. Subsequent chapters are comprised of essays authored by expert contributors which provide in-depth treatments of each of the seven chronological phases of his professional life as apprentice, mineral prospector, field work, cartographer, fossil collector, well sinker, and mentor.

Interspersed between these chapters are four major sections that function as a portfolio containing Smith's major geological maps arranged by geographic region (Borders and the North; Wales and Central England; East Anglia and the South East, and; The West). Each section displays map sheet sections from Smith's seminal 1815 map, his published and unpublished geological maps of English counties (1819-1824), and drawings and photographs of the fossils Smith collected himself from the predominant strata underlying these four geographic regions as identified in his *Strata Identified*

publications (1816-19). The book's 10-1/2 x 14-3/8 inch pages provide a suitably large canvas to display with abundant detail the numerous map sheets and illustrations. All maps and images throughout the work are reproduced in excellent color and include captions providing informative background context and publication-related details.

While Smith's portfolio of geological maps is fascinating in its own right, it is the accompanying essays that allow them to really shine by providing readers with the stories of their creation and situate them within the historical context of the times. For instance, in Chapter II. Mineral Prospector, Smith's meticulous and scientific approach to mining exploration is explained and illustrated using cross-sections of coal mine strata produced during his employment as an estate-surveyor. Accompanying the text in this chapter are historical engravings, watercolors and sketches of miners and mining equipment typical of England's Georgian era (1714-1837) which saw the birth of industrial revolution and early commercialization of agriculture.

A highlight of the book for those interested in maps and map history is Chapter IV. Cartographer. It details Smith's painstaking involvement in the meticulous process of publishing his most notable maps which were produced in collaboration with John Cary, England's pre-eminent cartographer-publisher. Examples of both early and later copies of Smith's 1815 map are shown as well as similar geological maps produced by competitors who liberally borrowed from Smith's masterpiece. Also included are six beautifully hand-colored panoramic horizontal cross-sections published in 1819 which illustrate the orientation of England's underground strata and its surface topography in three dimensions.

Just as Smith used 'ground-truthing' and fossil collection to develop the science of stratigraphy, readers of *Strata* will find that they are also required to invest time and effort to interpret the sequence of portfolio sections and chapters used to arrange its contents. Once the arrangement is understood, it becomes evident that this book is, in fact, laid out in a logical fashion though it still necessitates much flipping back and forth between pages of this handsome work.

Overall, *Strata* does a wonderful job of describing William Smith's immense geological legacy and illustrating it in full color with a complete presentation of his geological maps, sketches, fossil collection and related materials. It deserves a place on library shelves alongside another notable book about Smith entitled *The Map that Changed the World: William Smith and the Birth of Modern Geology* (2001, HarperCollins) by Simon Winchester. Highly recommended for academic and public libraries with collections related to geology, geography, and cartography.

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