



William Smith, the Father of English Geology

Alan Staniforth

William Smith caught a chill while on his way to a meeting of the British Association in Birmingham and died a few days later on 28th August 1839. He was buried at Northampton. In his three score years and ten he had risen from obscurity to become one of the most famous men of his time.

Smith was born on 23rd March 1769 at the village of Churchill in Oxfordshire. His parents were of humble origin, working the rich land in the neighbourhood. Like many of his day, William had little opportunity for any formal education, but he had a good retentive memory and was a keen and accurate observer, attributes he would put to good use in later life.

Smith's mother remarried when his father died in 1777 and at eighteen William became an assistant to Edward Webb of Stow-on-the-Wold. It was working under Webb, first on land enclosure maps and later on the survey of canal lines, that gave Smith his first opportunity to enlarge and apply his embryonic geological knowledge.

With the passing of the Canal Bill in 1794, Smith - still in his early twenties - found an increasing market for his specialist and largely self-taught skills. On a circuitous 900-mile journey to the north of England to survey canal lines and mining operations in Yorkshire, he was able to extend his observations and was soon in a position to relate

the rocks in the north to those he had already studied in the south of England.

Following this extensive tour, Smith was engaged for six years in superintending the works on the Somerset Coal Canal. With his increasing geological experience, he was able to advise the contractors on the best method of work. It was also now that he collected "extraneous fossils" and realised "that each stratum contained organised fossils peculiar to itself, and might, in cases otherwise doubtful, be recognised and discriminated from others like it, but in a different part of the series, by examination of them".

This is the first reference to one of Smith's great contributions to the science of geology, that characteristic fossils can be used to correlate strata across the country. Using this technique, he was able to produce, in 1815, the first large-scale geological map of Britain - or indeed of any country in the world. Printed on fifteen sheets to a scale of five miles to the inch and measuring 6 feet by 8 feet 6 inches, an original copy hangs in the Yorkshire Museum. A work of art in its own right, a comparison with a modern map shows only minor differences and serves to illustrate the accuracy of Smith's observations and recording. This was the dawn of stratigraphical geology and geological cartography. To celebrate the 200th anniversary of the publication of this great map a mosaic

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was created in the Museum Gardens in York which depicts the Yorkshire section in coloured pebbles.

Sadly, the publication of his map was overshadowed by other matters, mainly financial. Smith was forced to sell his extensive geological collection to the British Museum in order to pay his debts, but still spent ten weeks in the debtors' prison. In 1819 he gave up his London house and moved to the north of England, eventually settling in Scarborough.

It was at this time that the Scarborough Philosophical Society was formed and the members decided to build a museum, the Rotunda, at the Aquarium Top. The museum's circular design is credited to Smith, who suggested that geological specimens could be better displayed in their correct ascending order in a round building. A painted geological section of the Yorkshire

coast based on the work of Smith's nephew John Phillips can still be seen around the inner frieze of the dome. Although later used to display archaeological and local history material, the museum was extended and restored to its original purpose in 2008 and dedicated to William Smith. Between 1828 and 1834 Smith lived at Hackness, where he was employed as land steward to Sir John Johnson of Hackness Hall.

At last, late in life, recognition began to appear. He was given an Honorary Doctorate by Dublin University, and the Geological Society, which had shunned him in earlier years, now made amends and welcomed him into their midst. In 1831 he was awarded the first Wollaston Medal for services to geology. It was the President of the Society who, in presenting the medal, dubbed Smith 'The Father of English Geology'.



Find out more

'The Map that Changed the World' by Simon Winchester (2001)

'Strata' by John L Morton (2004)

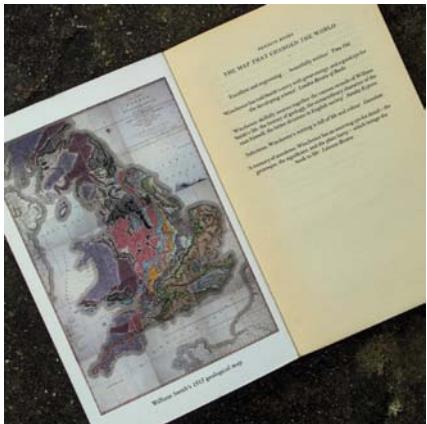
Rotunda Museum, Vernon Road, Scarborough YO11 2PS,
<http://www.scarboroughmuseumtrust.com/rotunda-museum/>

Yorkshire Museum, Museum Gardens, York – including The Mosaic Map, the Yorkshire section of Smith's map,
<https://www.yorkmuseumgardens.org.uk/the-mosaic-map/>

Interactive website on William Smith's maps
<http://www.strata-smith.com/>



William Smith in 1837



Smith's geological map



An ammonite, Rotunda Museum



The dome in the Rotunda Museum, Scarborough



Rotunda Museum