

WILLIAM SMITH

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William Smith
(1769-1839)

Known as 'the father of English geology', William Smith worked as a surveyor, building canals and draining marshes in England during the Industrial Revolution. Although his humble background was not typical for a scientist of his day, he is now famous for revolutionising the study of geological time, stratigraphy, and creating the world's first geological map of a nation.

'The map that changed the world'

In 1815, William Smith published his geological map of England and Wales, with part of Scotland. Around 350 copies were produced, costing between five guineas and twelve pounds, depending on their format. The map was hand coloured, with different colours representing different rock types. It is the first geological map of an entire nation, and the basis of all modern geological mapping.



William Smith's 1815 map, on display at the Geological Society of London beside a bust of Smith.

DID YOU KNOW?

By the early nineteenth century, geologists had begun to suggest that fossils were the remains of former life. Many believed they had been precipitated by the biblical flood, explaining their uneven distribution in the landscape. Smith was the first to recognise the value of fossils in correlating strata, and for distinguishing between similar layers of different ages.

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The Geological Society

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William Smith timeline

Date	Event
1769	Born 23 March in Churchill, Oxfordshire
1793-99	Worked for the Somersetshire Coal Company as a surveyor
1802	Introduced to Joseph Banks, President of the Royal Society
1815	Publishes 'A Delineation of the strata of England and Wales with part of Scotland' – the world's first geological map of a nation
1819	Spends 11 weeks in debtor's prison
1831/2	Awarded the first Wollaston Medal of the Geological Society, and a government pension of £100 per year
1839	Dies 28 August in Northampton

Hard times

William Smith spent 11 weeks in King's Bench Prison, a debtor's prison in London, between June 11 and August 31 1819. As well as the production of his map, he had undertaken various other projects which had proved expensive, including purchasing a quarry near Tucking Mill which turned out to be virtually worthless. Although he was awarded The Society of Arts' 50 guineas, and sold assets including his fossil collection, it was not enough to save him from bankruptcy and imprisonment.



The Wollaston Medal

Recognition

In 1831, the Geological Society finally recognised the contribution Smith had made to their science, holding an event at which the President, Adam Sedgwick, referred to him as 'the father of English geology.' In 1832 Smith was awarded the first Wollaston Medal, the Society's highest award. There is now an annual William Smith meeting at the Society, and a medal named after him.

The beginnings of the Industrial Revolution

Geology became increasingly important in the late 18th and early 19th centuries, as the Industrial Revolution saw rising demand for materials. Britain needed coal, and raw materials such as iron, limestone and clay.

An accurate geological map of the country was not just important as an academic exercise, but as an economic one. In 1802, The Society of Arts offered a reward of 50 guineas for anyone who could produce a geological map of Britain. After publication of his map, Smith was awarded the prize.

Smith and the Geological Society

The Society was formed in 1807, and began inviting a selection of people to join. Smith himself was not invited – it is likely he would have been thought not of the right class or means to take part in a 'geological dinner club.'

In 1808, a delegation from the Society visited Smith and saw early drafts of his map. Subsequently, the Society published its own geological map of Britain in 1820.

Though not a direct copy, it is clear that the Society map was influenced by elements of Smith's work. However, unlike Smith, the Society preferred not to use evidence of fossils to identify strata.

It would be another decade before the Society formally recognized Smith's contribution to their science.



The Geological Society's 1820 map, on display at the Society alongside a bust of George Bellas Greenough, President at the time.