

Franklin sparked the Discovery of Photosynthesis

David Stephenson

Ask a local and they will tell you that nothing has happened in the sleepy Yorkshire village of Thornhill since the English Civil War swept through in 1648, bringing despair to the Royalist cause.

But they're wrong. Another revolutionary passed through in May 1771 – Benjamin Franklin.

Say the word 'revolution' and you think violence, death and destruction. Franklin, though, was on a tour of the North and Midlands because he wanted to see at first hand how the Industrial Revolution was throwing up huge factories and shipping mass-produced goods and tools worldwide.

He was in close contact with the top scientists, engineers and industrialists of his day. One, Erasmus Darwin was the go-to man for everything scientific – both at the Royal Society and his own, informal Lunar Society. And if his name sounds familiar, that's because he had a little grandson called Charles.

On 23 May 1771 Franklin and his party arrived in Thornhill, having stopped off at another sleepy little place called Birstall to view electrical displays put on by a friend of his called Joseph Priestley.

Their host in Thornhill was a short, fat, dark-haired man called Rev. John Michell, but, as you might have guessed, he was far from being an ordinary country cleric. He was already a world famous geologist, having accurately described the science behind the devastating earthquake in Lisbon, Portugal in 1755. However, he had to relinquish his post as professor of geology at Cambridge University when he got married in 1764 – those were the rules back then.

A family benefactor, leading politician Lord George Savile, offered him the post of Vicar of Thornhill so he could continue his research studies. Michell's Einsteinian work included weighing planet Earth, theorizing about gravity, black holes, Red Shift and – tantalizingly – relativity. The American Physical Society described him as "so far ahead of his scientific contemporaries that his ideas languished in obscurity, until they were re-invented more than a century later."

But he had an extensive botanical collection from around the world thanks, in part, to Franklin sending him exotic seeds. And this played an important part in what happened in that short visit.



St Michael and All Angels - Rev. Michell's church.

Visited by Franklin on 23/24 May 1771.



Michell's Rectory today - a retirement home
(Fieldhead Court)

Franklin's touring group included a Dutchman called Jan Ingenhousz. He'd just made a fortune, courtesy of inoculating a very grateful Austrian royal family against the killer disease smallpox – all made possible by a recommendation from a leading doctor and close friend of Franklin, Sir John Pringle.

Ingenhousz was a rich, bored scientist, itching to do something new. Priestley's wife, too, was from an exceptionally rich industrialist's family. They were proud men with no money problems, eager to take up the next challenge. Priestley had been working extensively with carbon dioxide (supplied by a local brewery) and was becoming fascinated by gases and the nature of light.

We know from records that Michell's glasshouses held a strange, nocturnal plant called the 'Humble plant'. Did this get them talking about plants, light and gases? Whatever they talked about, the effect was electrifying. The next few years were their most productive, with inventions following discoveries. Photosynthesis, cellular respiration, the nature of light, oxygen, carbon monoxide, Brownian motion, extensive works in electricity, heat conduction and chemistry.

But why did the people of Thornhill never learn of their great visitor? And why is his stay glossed over in the travel journey kept by Franklin's party? The answer lies perhaps in politics. This was 1771 – troubled times. Lord George Savile was a great political figure in the land and a staunch advocate of American causes. Priestley, a republican and religious non-conformist, later had his house burnt down by a mob and emigrated to America. Some things are best forgotten.

People say that luck happens when preparation meets opportunity. Well, Benjamin Franklin and Rev. Michell provided the opportunity by bringing Priestley and Ingenhousz together in the rectory of a small, Yorkshire village. Intellectual sparks flew that in time forged the science of biotechnology.

Great ideas come from small places. From people who know, think and discuss.

David Stephenson is an ex-charity worker, ex-accountant, ex-French teacher and ex-resident of Thornhill, Yorkshire, currently living in Warsaw, Poland. Inspired as a child by the Sealed Knot's re-enactment of Thornhill's Civil War battle, he is fascinated by his village's ancient past, which includes a Roman hoard and an Anglo-Saxon king buried in the churchyard - killed in battle by the Vikings.