James Parkinson was many things: apothecary, surgeon, scientist, political radical, closet heretic. Today, most people know his name solely through the disease that immortalised it. A shame, because medicine was just one of Parkinson’s passions: he was described in his lifetime as “not merely the best but almost the only fossilist of his day”. And fossils, back then, were troublemakers. As a result, Parkinson struggled to reconcile the widely accepted biblical story of creation with the conflicting story being revealed to him by fossils. Decades before Darwin rocked the scientific world with his theory of evolution, the conflict gave Parkinson a headache.

Not literally, thankfully, because you didn’t want to be unwell in 18th-century London. Parkinson was born in 1755 – a time when epidemics festered in dirty, overcrowded tenements, one in two children died in infancy, bleeding was considered a cure-all, and medications containing mercury and other toxic substances did more harm than good. To top it all, there were no anaesthetics if you were unfortunate enough to need surgery.

It was against this backdrop that the young Parkinson was apprenticed to his father for seven years, learning the art and mystery of an apothecary. His ambition, though, was to become a surgeon, so when his father died in 1784, leaving him to manage the practice single-handedly, Parkinson attended evening classes given by the legendary surgeon John Hunter. Above the operating theatre where Hunter taught was a museum housing his spectacular natural history collection. There, a carefully ordered series of skulls, “from the most imperfect of the animal, to the most perfect of the human species”, testified that Hunter was thinking about evolutionary progression more than half a century before Darwin. But when Parkinson visited, it was another display that inspired him: Hunter’s collection of 3000 fossils. From that moment, Parkinson began collecting fossils himself, a passion that would come to dominate his life.

He began by looking for them in the gravel pits around London, but soon moved on to bidding for fossils at auctions, and buying and swapping them with dealers and collectors. Geology was an embryonic science and little had been written on fossils, so as Parkinson’s collection grew he found it hard to identify and classify many of his specimens. For example, while many fossil seashells were almost identical to their modern-day counterparts, other fossils like that of Megatherium – an elephant-sized ground sloth (top right) – had no modern analogues. More worryingly, some local fossils resembled exotic species today found only in the tropics. When was it, Parkinson asked, that elephants and hyenas had “lived together in [Britain], were shaded by forests of palms, and took shelter in caverns along with bears as large as our horses?” Such discoveries were creating one conundrum after another, so Parkinson decided to write an account of these wondrous objects himself.

The first volume of Organic Remains of a Former World was published in 1804. The second and third followed in 1808 and 1811. Over those years, the collector transmogrified into a scientist, now diligently examining and analysing every fragment for the information it could provide. Were the ubiquitous fossilised crinoids (above), for example, plants or animals? It was Parkinson who revealed that their fronds were tentacles and not roots. Each description was accompanied by exquisite illustrations, mostly drawn by him and hand coloured by his daughter Emma.

But there was a complication. In Parkinson’s day, religion lay at the heart of most people’s
understanding of the world: Earth was 6000 years old and had been created in six days, and God had once sent a great flood to kill all humans except Noah and his family. Parkinson was nervous about offending the religious sensibilities of his audience, as Darwin would be decades later. But despite his trepidations, he determined to face this challenge and "conceal no conclusion, however repugnant to popular opinion or prejudice".

Much hinged on whether it could be proved that humans existed before Noah’s flood, confirming the biblical account of creation. Evidence for the flood was seemingly demonstrated by fossils found on the tops of some mountains, and much of northern Europe being covered in sediments that had evidently been transported hundreds of miles. How else could these have moved such distances? Today we know these sediments are the result of ice ages, which were then not known about. Since animal fossils were found in these sediments then surely, Parkinson argued, fossilised humans and "their various utensils and articles of furniture must necessarily have been frequently discovered" too. But there was scant evidence of humans in Britain’s fossil record, so Parkinson boldly declared, "We are without a proof of the existence of any human beings at the time of the deluge." He even went as far as accusing theologian William Buckland, the University of Oxford’s first reader of geology, of "misdirecting the exertions of science" because Buckland would not agree. In an angry letter, he explained to Buckland that the biblical account of the flood should be attributed to Moses’s "uninformed judgement, embracing the adopted tradition of that day".

When it came to the question of extinction, Parkinson realised that "many genera and species... which existed before the flood, are now entirely lost". But extinction implied such a flaw in God’s architecture of the universe that to argue that it occurred bordered on heresy. Nevertheless, wrote Parkinson, "the facts are indubitable [despite the] impropriety of such modes of reasoning". Furthermore, how did new species arrive on the planet? Parkinson must have been aware of the ongoing debate around the transmutation of one species into another, but he doesn’t discuss it in his books.

In any case, Organic Remains became incredibly popular and made Parkinson internationally famous, with many fossils being named in his honour. Fossils, he insisted, told us about the formation of Earth in a way nothing else could, and history has proved him correct.

**Fickle history**

But history is fickle, and so Parkinson is better known today for something else entirely. Next month, it will be 200 years since Parkinson, then in his early 60s, published “An essay on the shaking palsy”. The result of years spent observing patients, it was the first time the disease was recognised as a distinct medical condition. The essay described in remarkable detail the varied symptoms still used to diagnose Parkinson’s disease today. Mortified at being unable to offer a cure for it, he only hoped that physicians of the future would “point out the means of relieving a tedious and most distressing malady”. While the essay was favourably reviewed in the medical press, it was not recognised at the time as the classic it turned out to be: it was 55 years before the disease was first named in his memory.

In 1823, a year before his death, Parkinson was awarded the Royal College of Surgeons’ first Gold Medal. The college had established the award for “distinguished labours, researches and discoveries” in 1802. It took them 21 years to find anyone of sufficient calibre to be its first recipient. However, the college didn’t award it for Parkinson’s many medical publications, but for his “splendid Work on Organic Remains”.

So while Parkinson would no doubt have been proud to know that a disease now bears his name, surely it is his outstanding contribution to palaeontology – “my favourite science”, as he called it – for which he would rather we remembered him today.

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