



Kirkdale's Contribution to the Theory of Evolution

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The chance discovery of one of the most exciting finds of the early 19th century, for British geologists and palaeontologists at least, happened in the most unlikely of places. Hidden away in a secluded valley close to the market town of Kirkbymoorside, Kirkdale's only place of interest to locals and visitors alike up to that point had been the ancient Minster of St Gregory's, with its wonderfully inscribed Saxon sundial.

All this was to change in the summer of 1821, when workmen quarrying the limestone rock-face above Hodge Beck, just to the east of the church, exposed the entrance to a network of caves. Amongst the debris, locals began to uncover animal bones and teeth, which in turn attracted the attention of a young visitor from London. He went in search of the source of these fossils, and on arrival at the quarry discovered that a narrow entrance in the rock face had been revealed, about 40m above the riverbed of Hodge Beck.

After careful exploration he was greeted with an amazing haul of fragmented bones and teeth embedded in the cave floor, which was covered in thick blue clay. The visitor was told that a couple of years previously workmen had uncovered other bones, but they had been thrown into the river or simply added to the stone used in road surfaces:

the site lay close to the old road between Kirkbymoorside and Helmsley.

Realising that this was something rather special, the young man headed back to London with his finds and soon word spread amongst the museums, reaching one of the most interesting characters in the field of geology: William Buckland.

Buckland was born in 1784 and developed a passion for fossils at an early age. He went on to study at Oxford University and was soon visiting various parts of England and Europe for his research into the expanding field of and paleontology. The news of the caves in Kirkdale was too good an opportunity to miss and Buckland came up to explore and record the findings in what proved to be a treasure trove of fossils.

With the permission of the neighbouring landowners, Mr. Salmond of York was hired to oversee the clearance of the caves. As word spread, more and more interested parties came to see for themselves what was happening. Not ones to miss a business opportunity, the local lads went in search of the previously discarded bones and teeth along Hodge Beck and sold them on to these academic visitors. One lucky lad sold a tusk from a bear for one and a half guineas – over £100 in today's money!

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Once the bones were removed William Buckland began to catalogue and identify them, carefully documenting the condition of each one. In all he found 23 species of animal, many of which were not previously known to have lived so far north, such as hippopotamus, elephant and rhinoceros. Many of the bones were identified as hyena, which gave the cave the title of 'the Hyenas' Den'. He believed that the remains had been dragged into the caves by hyenas and showed that it had been their home for generations.

Buckland raised the notion that the bones could not have been washed up there from the tropics by the Biblical Flood, as others believed; he stated that these remains pre-dated the Flood and at best had been covered in mud by the deluge. At the time, these ideas challenged orthodox beliefs: Buckland himself was an ordained priest, the process of evolution had not yet been recognised,

and it was believed that all life had been created by God in its present form. His work in Kirkdale was regarded as the benchmark for how careful scientific research should be undertaken and made him the major figure in British geology, bringing him fame and recognition.

The cave network itself became an attraction, with Victorian and Edwardian gentlemen coming to explore the 90m system, with only the aid of candles to make their way through the tight passages, soaking in water and sticky mud. As the years passed the excitement died away, and today it would be easy to miss Kirkdale's caves, as the site has been bypassed by the new main road and most tourists again only come to see St Gregory's Minster. Local cavers, however, with their specialist equipment, continue to explore ever deeper into the limestone systems. Who knows if there are other secrets yet to be revealed in the Hyenas' Den?



Find out more

Ryedale Family History Group Research Room, Hovingham,
<http://www.ryedalefamilyhistory.org/>

Yorkshire Museum, Museum Gardens, York,
<https://www.yorkshireremuseum.org.uk/>

Kirkbymoorside History Group Archives,
<http://kmshistory.btck.co.uk/>



Mammoth's tooth found in Kirkdale Cave



Part of a hyena's jaw found in Kirkdale Cave



Hodge Beck, Kirkdale, close to the cave



Kirkdale Cave