



Louis Hunton, a Scientist who Changed the World

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Louis Hunton (1814-38) was one of the people who helped shape the modern world. His achievement in the science of geology is still used today and marks out his short life as one which deserves our gratitude and recognition.

Son of William Hunton, the Alum Agent at Loftus Alum Works, Louis was born at Hummersea House on the windswept Yorkshire coast in 1814, the eldest of nine children. He was christened Lewis but later changed his name to Louis out of respect and admiration for French scientific and social progress. He was educated in a school for local children and spent a great deal of time exploring the local quarries and their associated rocks and fossils, from which he managed to uncover a very useful fact, namely that fossils could be used to tell which rocks you were looking at.

The Lower Jurassic rocks on this part of the coast are approximately 180 to 200 million years old, give or take a few million years. Formed at the bottom of an ancient tropical sea that teemed with life, these rocks contain many different fossils including huge marine creatures such as Plesiosaurs and Ichthyosaurs. They also hold vast numbers of ammonites, squid-like sea creatures that evolved relatively rapidly and left their many different shells as markers of the passage of time.

It was known by the early 19th century that certain types of sedimentary rocks were formed in layers, piled one on top of the other, with the oldest normally at the bottom and the youngest at the top. But how to match these rock piles - or sequences - if they were geographically separated? This was the question which the young Louis was able to answer.

He studied rock sequences all over Cleveland, sampling and noting thousands of ammonite fossils from every sequence. By carefully identifying each type of ammonite, he was able to create a fossil sequence for each location and then match the sequences over many miles. He was meticulous in his collection and noted that only fossils still embedded in the rock face should be used: up to this point, geologists often collected their specimens from the debris at the foot of cliffs, so they were not always sure exactly where they came from within the rock sequence.

Louis' discovery is now known as biostratigraphy, the science of dating and correlating rock sequences, and is used by geologists all over the world for processes such as oil and gas prospecting, understanding global climate change, and learning about geological history.

At the age of 21, Louis wrote his only scientific article on his discovery, entitled: 'Remarks on a section of the Upper Lias and Marlstone of Yorkshire, showing the

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limited vertical range of the species of Ammonites and other Testacea, with their value as Geological Tests'. This was read to the Geological Society of London on 25th May 1836. We cannot be certain of its immediate effect on the geologists of the day but early the following year the influential geologist Charles Lyell addressed the Society and noted how useful Hunton's ideas would be for future geological correlation.

Sadly, Louis' work appears to have drifted into the shadows of history and was largely ignored for nearly two centuries, until 2014, when a project was launched to mark the 200th anniversary of the birth of this remarkable man and to commemorate his life and achievements. The project was led by the North East Yorkshire Geology Trust in partnership with a host of other supporters, and included a Service of Thanksgiving for the life and work

of Lewis Hunton at St. Leonard's Church in Loftus, the church where he was baptised. In attendance were the Bishop of Whitby, the local Member of Parliament, four local mayors, Louis' biographer Dr Hugh Torrens, many local people - and of course several geologists!

Plaques were erected at his birthplace of Hummersea House and in the market square of Loftus, and an interpretation panel explaining his life and work was placed on the Cleveland Way within sight of his birthplace and next to the quarries where he discovered the secret value of ammonites.

Louis died tragically young at the age of only 23 years, in Nimes, France, of tuberculosis. In 1843 an ammonite - *Tragophylloceras huntoni* - was named after him, and in other ways too he left a lasting, practical and valuable legacy for the generations that succeeded him.



Find out more

Whitby Museum, Pannett Park, Whitby YO21 1RE,
<https://whitbymuseum.org.uk/>

Lewis Hunton Trail (Loftus) - self-guided walk leaflet available at
<https://www.walkingloftusandthenorthyorkshirecoast.com/self-guided-walks>

North East Yorkshire Geology Trust,
<http://www.northyorkshiregeologytrust.com/pages/archive/lewishutton.html>

