

Finding the fossils

▶ The Stanhope tree was found in a sandstone quarry at Edmundbyers Cross, north of Stanhope, in 1915. Its discovery is recorded by this photograph in the Auckland and County Chronicle, dated 13 May 1915. The accompanying article also mentions another fossil tree, which was found in 1914 and taken to the Hancock Museum in Newcastle. The tree shown here was brought to Stanhope in the early 1960s, in large pieces which were reassembled in the churchyard.



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◀ There are also intriguing records of several other local fossil trees. This photograph shows two fossil trees – also from Edmundbyers Cross. The larger tree was taken to the Hancock Museum, and thus may be the same as the 1914 tree mentioned in the

newspaper article above. Another tree, possibly the smaller of the two shown here, went to Muggleswick. Yet another fossil tree, which was discovered in later years by a bulldozer driver at Edmundbyers Cross, was taken to Durham University.



▲ The fossil tree being reassembled in Stanhope Churchyard in 1964.

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Written by Elizabeth Pickett and Brian Young.
Thanks to all who contacted us with information about the Stanhope fossil tree.

NORTH PENNINES

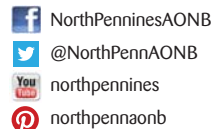
Area of Outstanding Natural Beauty



The North Pennines is one of England's most special places – a peaceful, unspoilt landscape with a rich history and vibrant natural beauty. In recognition of this it is designated as an Area of Outstanding Natural Beauty (AONB). The area is also a Global Geopark – an accolade endorsed by UNESCO.

Discover the fossil tree in front of St. Thomas' Church, next to Stanhope Market Place in Upper Weardale.

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The AONB Partnership has a Green Tourism award for its corporate office



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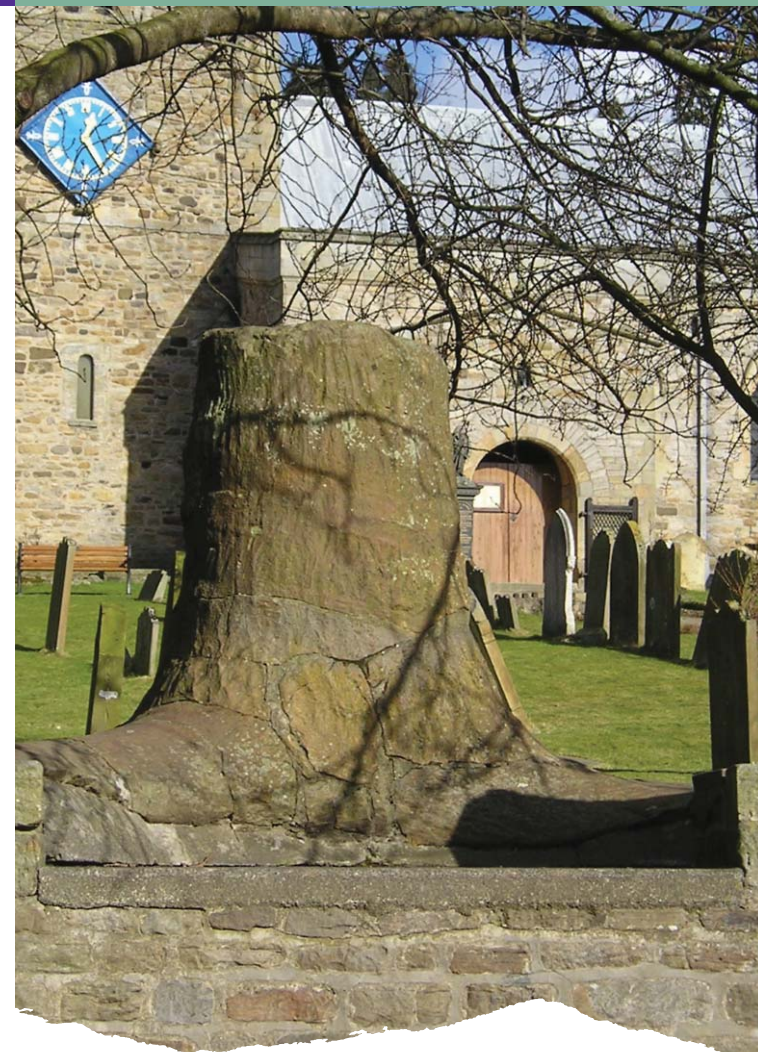
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Stanhope fossil tree



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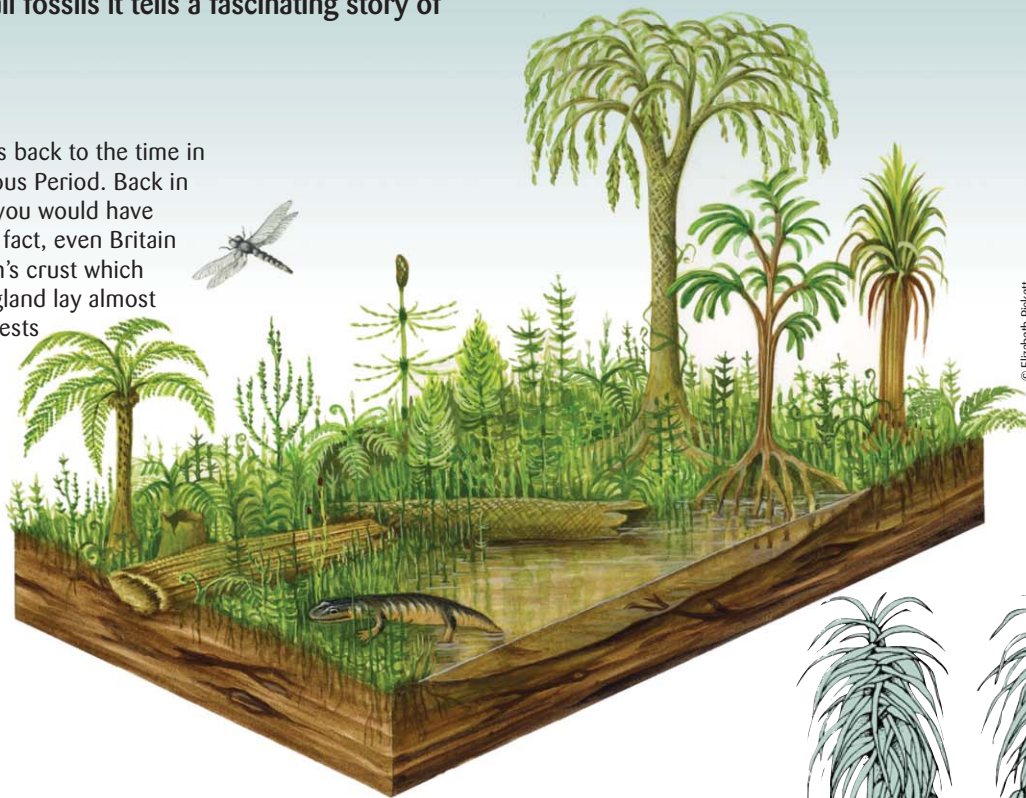
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Imagine standing in a steaming, tropical rainforest, amidst the leaves of giant ferns and horsetails. You are in Stanhope – 320 million years ago! The Stanhope fossil tree grew in this forest and like all fossils it tells a fascinating story of ancient life in the distant past.

Carboniferous world

The story of the Stanhope tree takes us back to the time in Earth history known as the Carboniferous Period. Back in those distant times there was nothing you would have recognised as the North Pennines – in fact, even Britain did not yet exist. The piece of the Earth's crust which would eventually become northern England lay almost astride the equator, covered by rainforests and fringed by shallow, tropical seas.



© Elizabeth Pickett

Silent forest

For millions of years the North Pennines was part of a vast, tropical swamp. Dragonflies the size of kestrels flew through the trees, and giant scorpions and cockroaches scuttled through the undergrowth. Large amphibians, like alligator-sized newts, lived by pools and riverbanks. There were no birds or mammals – they had yet to evolve, and even the first dinosaur would not appear for another 100 million years!

This Carboniferous forest contained some of the earliest large land plants. Giant ferns and horsetails were abundant, growing to several metres high. There were huge trees, tens of metres high, but these were unrelated to modern trees. The most advanced trees were primitive ancestors of modern conifers. True flowering plants had not yet evolved.

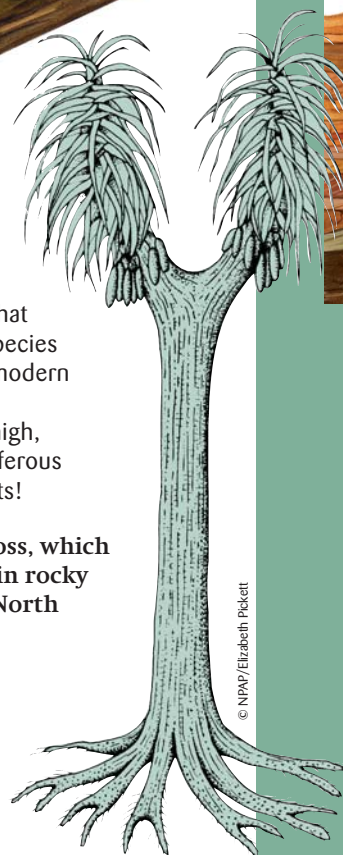


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◀ Fir clubmoss, which grows today in rocky parts of the North Pennines.

The Stanhope tree

This is a superb relic of one of the trees that grew in the Carboniferous forest. It is a species known as *Sigillaria*, an early ancestor of modern clubmosses. Today clubmosses are small mountain plants, only a few centimetres high, but in the tropical swamps of the Carboniferous Period they grew into 30-metre-high giants!



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Cast in stone

When the tree died and was buried, sand from a nearby river filled the space left by the rotting wood, and eventually hardened into sandstone. The sandstone now forms a perfect cast of the original tree. You can even see the impressions of the bark on the trunk. Natural casts of small trunks, roots and logs are quite common in the local sandstone – but spectacular specimens like the Stanhope tree are rare.

▶ The tree may have died after being flooded by a river. The soft inner tissues rotted away and layers of sand built up around the tree stump.



◀ As the tree was buried under layers of sediment, the hollow trunk filled with sand. The bark rotted away but left its impression on the sand inside.



▶ The sand eventually hardened into sandstone, and millions of years later a quarryman unearthed the cast of the tree from its stony tomb.



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◀ How the tree might have looked.