

Pinus yorkshirensis - Object of the Month

Ben Slater - working on palaeontology at the University of Birmingham - talks about his choice of the Lapworth Museum of Geology Object of the Month.

Title: [Fossilised pine cone - lapworth Museum of Geology - Object of the Month \(/facilities/lapworth-museum/about/object-pine-cone.aspx\)](#)

Duration: 2.26 mins

Speaker Names (if given): **S1** Ben Slater, Palaeontologist, University of Birmingham

S1 I'm Ben Slater and I work on Palaeontology here at the University of Birmingham. What this is a microscope slide of the oldest fossil pine cone in the world. There's an interesting story behind this specimen. It was originally found on an undergraduate field trip to the Yorkshire coast many years ago. The specimen was brought back here to the Lapworth Museum and deposited in the collections and it remained in the archives for many years until recently when a paleobotanist working here at the University of Birmingham was rummaging through the collections and came across the specimen. The fossil caught his eye because fossil pine cones are exceptionally rare, especially of this level of preservation and detail. So, a team of researchers from around the world was assembled to look at this specimen. One of the first things they wanted to do was to determine the age of the specimen. Previously the label on the fossil only told you that it was from Yorkshire and it had no details of the age or where specifically it was found.

So, one thing you can do with sedimentary rocks, which fossils occur inside, is look at the microfossils inside the rock to determine the age and this came back, after studying the pollen and spores inside the rock, that it was 131 to 129 million years old. This placed the fossil pine cone at over five million years older than the previous record holder for the oldest pine cone in the world, which is significant in itself. Another reason this fossil is significant is because it is exceptionally preserved. One thing that paleobotanists want to do is extract as much information from a fossil as they possibly can. One way of doing this is to section it a different variety of angles so that they can build up an internal three-dimensional picture of the anatomy of the fossil inside. This research was then published in the International Journal of Plant Sciences as part of a collaboration between workers here at the University of Birmingham and in North America and at the British Geological Survey.

I think the pine cone makes a good Object of the Month because it demonstrates that the research collections here at the Lapworth Museum are world class and contribute to ongoing scientific research. It also shows that some older fossils that are remaining in the archives can still throw up a few surprises.

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