

**“Virtual fossils: Soft bodied sensations from the Silurian Period”**  
**Professor Derek Siveter**  
**Oxford University**  
**(The 10<sup>th</sup> Public Lecture)**

We tend to think of fossils as preserved bone remnants. However, Professor Siveter explained that in the Silurian Period the majority of life forms were soft bodied and marine dwelling and so it was generally thought that remains from this period were almost non-existent. It has been found that in the unusual event of sudden clay or volcanic ash covering, even soft bodied remains can be impregnated with mineral salts and be preserved.

The team involved in this research, have been fortunate to find just such an unusual fossil bed in Herefordshire. This area was part of a shallow tropical sea situated just south of the equator which was subject to a sudden fall of volcanic ash, which preserved the life forms of that time. The fossils are found within rounded calcite nodules surrounded by the volcanic lava.

Professor Siveter described in graphic detail the fascinating techniques used to analyse the minute fossils embedded in the rock samples discovered. These methods involved creating very thin sliced sections of the hardened remains, photographing them, and by computer modeling recreating the whole organism in three dimensions. The resulting images showed in great detail and variety, the primitive precursors of worms, snails, jellyfish and barnacles that were extant at that time. There was a great abundance of all varieties of small arthropods, the equivalent of modern crabs, insects, spiders and centipedes.

This whole project has given us new insights into the variety of life on earth 425 million years ago.

*Given on Thursday 11<sup>th</sup> October 2012 at the Royal Agricultural College*