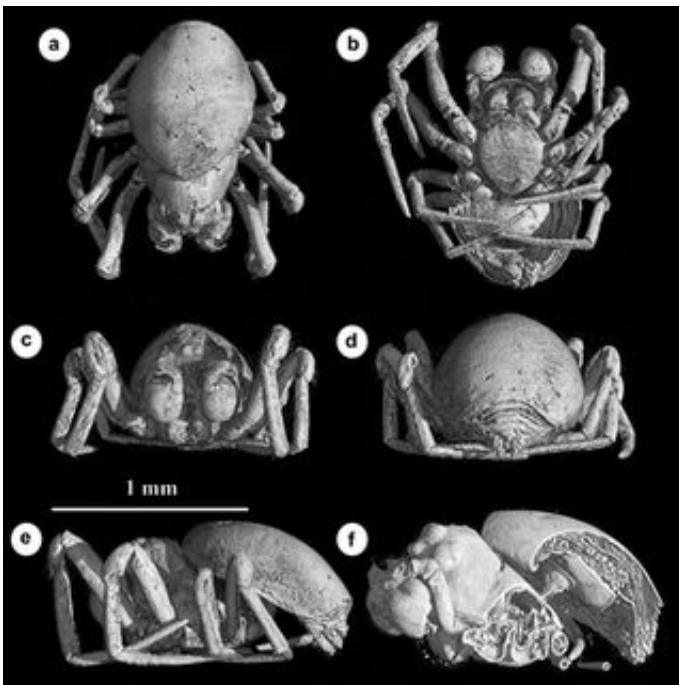


Scientist brings 50 million year old spider 'back to life'

October 29 2007



3D images of the spider. Credit: University of Manchester

A 50-million-year-old fossilised spider has been brought back to life in stunning 3D by a scientist at The University of Manchester.

In a paper published in the latest issue of the *Zootaxa* journal, Dr David Penney and co-authors from Ghent University in Belgium report on the use of a technique called 'Very High Resolution X-Ray Computed Tomography' (VHR-CT) to 'digitally dissect' tiny fossils and reveal the

preservation of internal organs.

Dr Penney, from The School of Earth, Atmospheric and Environmental Sciences (SEAES), specialises in studying spiders trapped and preserved in amber tens of millions of years ago.

The male spider studied in his latest paper is a new species named *Cenotextricella simoni*. It is around 53-million years old and was found preserved in amber in an area of France known as the Paris Basin.

This is the first time the VHR-CT technique has been used to digitally dissect a fossil in amber – and Dr Penney says it has the potential to ‘revolutionise’ their study.

The VHR-CT technique was originally developed for medical diagnostic purposes.

Dr Penney said: “This technique essentially generates full 3D reconstructions of minute fossils and permits digital dissection of the specimen to reveal the preservation of internal organs.

“Up until recently the only place to do such scans was at The University of Texas, although they never achieved results like these.

“My colleagues in the department of Subatomic and Radiation Physics at Ghent University in Belgium have significantly increased the resolution of the technology, bringing some quite amazing results.

“This is definitely the way forward for the study of amber fossils.

“Amber provides a unique window into past forest ecosystems. It retains an incredible amount of information, not just about the spiders themselves, but also about the environment in which they lived.”

Dr Penney is currently spending an indefinite period in the African jungle in a 'living laboratory' studying spiders.

Earlier this year, a species of spider which dates back more than 20 million years was named after Dr Penney. The amber-encased spider which was discovered deep in a Mexican mine is thought to have lived long before the first humans.

It was found by a Mexican researcher who earned the right to name the species and he chose the name 'Episinus penneyi' in honour of his former colleague.

Source: University of Manchester

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