

Spider blood found in 20 million year old fossil

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A scientist from the University of Manchester has discovered the first identified droplets of spider blood in a piece of amber up to 20 million years old.

Two droplets of blood, technically known as haemolymph, have been preserved in the amber which also contains the spider – Filistatidae – a family commonly found in South America and the Caribbean.

The droplets are the first identified examples of spider blood ever found

in an amber fossil. It is possible the blood could be used to extract DNA.

The fossil, which is 4cm long and 2cm wide, was discovered in the Dominican Republic and dates back to the Miocene period.

Palaeontologist Dr David Penney, of the School of Earth, Atmospheric and Environmental Sciences, has now used the blood droplets to trace how, when, and where the spider died all those years ago.

David, said: “It’s amazing to think that a single piece of amber with a single spider in it can open up window into what was going on 20 million years ago.

“By analysing the position of the spider’s body in relation to the droplets of blood in the amber we are able to determine how it died, which direction it was travelling in and even how fast it was moving.”

In the latest issue of the journal Palaeontology (2005, vol. 48, part 5) David describes how the spider died. He believes the spider was climbing up a tree when it was struck head-on by a sudden strong flow of resin. The spider then became engulfed in the resin and died.

He argues that the shape and position of the blood droplets reveals which direction the spider was travelling in. It also reveals which of the spider’s legs broke first.

David discovered the fossil in 2003 during a visit to the Museo del Ambar Dominicano in Puerto Plata, Dominican Republic. His research initially focused on the spider which he identified as an entirely new species of spider. On his return to the UK, further research revealed the droplets of blood and the information the fossil contained.

Source: The University of Manchester

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