

Mystery of fossilized trees is solved

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An international research team has found evidence of the Earth's earliest forest trees, dating back 385 million years.

Upright stumps of fossilised trees were uncovered after a flash flood in Gilboa, upstate New York, more than a century ago. However, until now, no-one has known what the entire trees looked like.

Two years ago, two fossils were found near Gilboa of trees which had fallen sideways, with their trunk, branches, twigs and crown still intact.

American researchers called in Dr Christopher Berry of Cardiff University, an expert who has studied tree fossils around the world for the last 17 years. Dr Berry was able to identify the trunks as being of the genus *Wattieza*, a tree fern-like plant.

Small fragments of *Wattieza* have been found in the past, but there was no direct evidence of how large the plant could grow. The new specimens show that they reached at least 8 metres in height and formed the first known forests on earth.

Dr Berry, of Cardiff's School of Earth, Ocean and Planetary Sciences, said: "This is a spectacular find, which has allowed us to recreate these early forest ecosystems. Branches from the trees would have fallen to the floor and decayed, providing a new food chain for the bugs living below.

"This was also a significant moment in the history of the planet. The rise of the forests removed a lot of Carbon Dioxide from the atmosphere.

This caused temperatures to drop and the planet became very similar to its present-day condition."

Dr Berry worked with colleagues from Binghamton University, New York and from New York State Museum, which discovered the two trunk fossils. Their findings are published in the April 19 edition of the scientific journal *Nature*.

Source: Cardiff University

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