

In world oldest forest discovered in the US: Facts about the 386 million year old fossil forest

02 January 2019



Researchers including a team from Cardiff University discovered the world's oldest fossil forest last month in a sandstone quarry in the US. The 386-million-year-old forest located in Cairo, New York, is around 2 or 3 million years older than what was thought to be the world's oldest forest at Gilboa, also in New York State and around 40 kilometres away from the Cairo site.

The fossil forest in Cairo would have spread from New York all the way into Pennsylvania and beyond, according to the researchers from Binghamton University, and New York State Museum in the US.

Why is the discovery of the world's oldest forest so important?

It provides the first piece of evidence that the transition of forests to being the modern forests that we know today, began earlier than we previously thought.

How was the research on the oldest fossil forest carried out?

The research was carried out by researchers from Binghamton University, New York State Museum in the US, and Cardiff University in the UK.

Here are a few facts about the oldest forest ever discovered:

1. The oldest forest ever discovered is a 386-million-year-old fossil forest in a sandstone quarry in Cairo, New York.
2. The world's oldest forest ever found spreads from New York all the way into Pennsylvania and beyond.
3. As per one of the researchers this fossil forest looked like a fairly open forest with small to moderate sized coniferous-looking trees with individual and clumped tree-fern like plants of possibly smaller size growing between them.
4. The research showed that the forest was **home to at least two types of trees:**
 - Cladoxylopsids, primitive tree-fern-like plants, lacked flat green leaves, and grew in vast numbers at Gilboa
 - Archaeopteris had a conifer-like woody trunk and frond-like branches which had green flattened leaves
5. A single example of a third type of tree was also uncovered, which remained unidentified but could possibly have been a lycopod, the researchers said.
6. All these trees **reproduced using only spores rather than seeds**, they said.
7. According to the co-author of the study Chris Berry from Cardiff University, this find of the oldest fossil forest surprised them because it showed plants which were previously thought to have had mutually exclusive habitat preferences growing together on the ancient Catskill delta.
8. The team also reported a '**spectacular' and extensive network of roots** which was more than eleven metres in length in some places and belonged to the Archaeopteris trees.
9. The **roots were pivotal to the co-evolution of forests and the atmosphere**, they said.
10. It is these long-lived woody roots, with multiple levels of branching and small, short-lived perpendicular feeder roots, that transformed the interactions of plants and soils, the researchers said.
11. The researchers said that the Cairo forest is older than the one at Gilboa because the fossils were lower down in the sequence of rocks that occur in the Catskill mountains.

The team mapped over 3,000 square metres of the forest at the abandoned quarry in the foothills of the Catskill Mountains in the Hudson Valley.

Source: <https://www.indiatoday.in/education-today/gk-current-affairs/story/world-s-oldest-forest-discovered-in-the-us-facts-about-the-386-million-year-old-fossil-forest-1633280-2020-01-02>