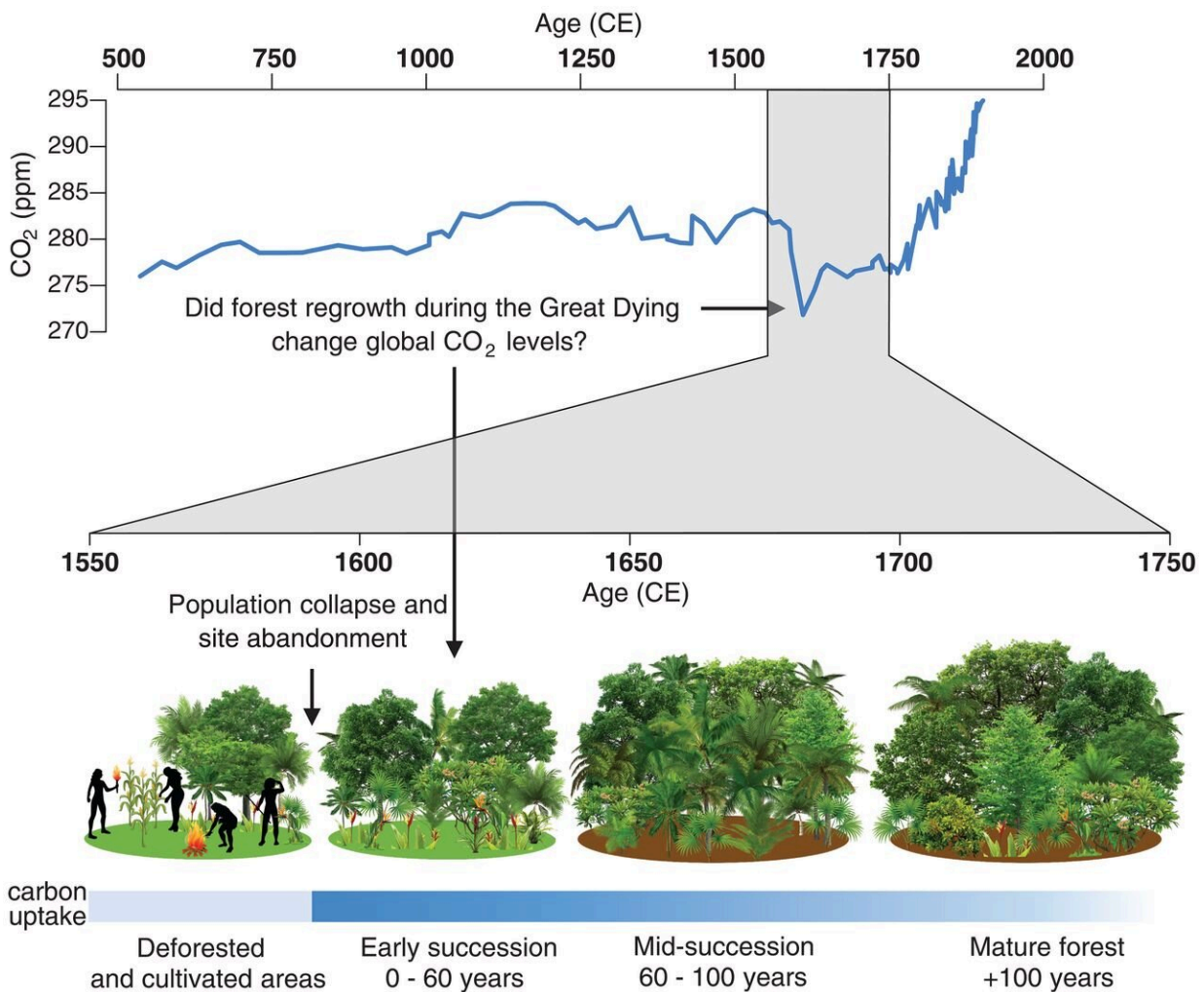


Pollen study shows forest regrowth began hundreds of years before arrival of Europeans in Amazonia

April 30 2021, by Bob Yirka



How reforestation could relate to atmospheric carbon concentrations. Credit: *Science* (2021). DOI: 10.1126/science.abf3870

An international team of researchers has found evidence showing that forest regrowth in Amazonia began prior to the arrival of Europeans in South America. In their paper published in the journal *Science*, the group describes their analysis of fossilized pollen retrieved from lake beds in the region.

Prior research has found that during the mid-16th century, there was a dip in carbon dioxide levels in the atmosphere above South America—the dip has been attributed to forest regrowth that occurred after Europeans arrived. Not long after Europeans arrived in South America, the population of Indigenous people began dropping. This was due to the introduction of diseases, slavery and warfare. As the population dropped dramatically, [crop fields](#) that had been attended by Indigenous people were abandoned, allowing the land to revert back to forest. The addition of new forest, it has been believed, pulled increased amounts of carbon dioxide from the air. But now, this scenario has come under question as the researchers with this new effort have found evidence suggesting that farmers in Amazonia began abandoning their fields hundreds of years before the Europeans arrived.

The work involved collecting pollen fossils from the bottoms of 39 lakes across Amazonia embedded in sediment. The depth at which they were found in the sediment was used to measure their age. In looking at the pollen fossils, the researchers found that forest regrowth was occurring in the Amazon basin approximately 300 to 600 years before the dip in carbon dioxide levels occurred. They also did not see evidence of reforestation occurring in the two centuries following the arrival of the Europeans. They note that for the years 950 to 1350, the pollen fossils showed that there were more places in Amazonia that were gaining forest than were losing it. The farmers had clearly begun abandoning their fields long before the Europeans arrived.

The researchers did not find any evidence to explain why the early farmers began abandoning their fields, but suggest that climate change may have played a role. They also note that [political unrest](#) might have been a contributing factor, as well.

More information: M. B. Bush et al. Widespread reforestation before European influence on Amazonia, *Science* (2021). [DOI: 10.1126/science.abf3870](#)

© 2021 Science X Network

Citation: Pollen study shows forest regrowth began hundreds of years before arrival of Europeans in Amazonia (2021, April 30) retrieved 6 May 2024 from <https://phys.org/news/2021-04-pollen-forest-regrowth-began-hundreds.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--