

PHOTO COURTESY GIANT SCREEN FILMS  
Columbian Mammoth trapped in the tar at the  
La Brea Tar Pits.

PHOTO BY  
CHRISTIAN CHAVEZ

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Natural History Museum of Los Angeles  
County and USC researchers collaborated to  
create scientifically accurate virtual models of  
Pleistocene fauna. Augmented Reality filters are  
available on Instagram, Snapchat and Sketchfab.



these animals were able to migrate out of North America all over the world.”

### Space and Time Dictate Environments

Fossil studies at La Brea reveal that the region had multiple environments. Scientists also take into consideration a span of at least 55,000 years and believe there is a possibility that the same area had multiple types of environments across time.

“We know that there were multiple environments across space,” Balisi said. “At least some of that was a savannah-like environment, but there were also mixed woodlands, the chaparral environment that we have today. There was some of it already, like coastal sage scrub-type environments.”

Scientists at La Brea work on creating a complete picture of the ecosystem, in which large mammals thrived and then went extinct.

Balisi says that while in the past the focus was on recovering the large fossils found in tar deposits, now it shifted toward plants and climate. Because plants need specific temperatures, humidity and shade to thrive, they tell the best story of climate.

“The Tar Pits preserve a record of climate change that might be useful for us interpreting the period of climate change that we are in now,” Balisi said. “Plants are closely tied to the climate, that’s why people are studying the climate now.”

According to the La Brea Tar Pits Museum “Botany Collections,” scientists identified 158 species of wood, seeds, cones, leaves, and pollen. They used fossils recovered from tar deposits and created a Pleistocene Garden to give visitors a better understanding of how L.A.’s flora looked during the Last Ice Age. They say that 50,000 years ago, the climate in L.A.’s basin was similar to today’s Monterey peninsula. Monterey gets three more inches of rain and fewer sunny days than Los Angeles. The summer temperature in the peninsula is around 66.5 degrees while in L.A. it is closer to 90 degrees.

Weeks says that all the plants that grow today in the Pleistocene Garden were also present during the Last Ice Age.

“It wasn’t that long ago in evolutionary terms,” Weeks said. “So a lot of the plants that were here 20,000 years ago are still here and are things that mammoths would have eaten.”

### Scientists Review Takeaways of Extinction

**“CALIFORNIA HAS REALLY GOOD LAWS ABOUT ENVIRONMENTAL PROTECTION AND CULTURAL AND HISTORICAL PRESERVATION, SO EVERY MAJOR CONSTRUCTION PROJECT NEEDS A PALEONTOLOGIST TO SUPERVISE EXCAVATIONS. IF THERE IS A FOSSIL, THE PALEONTOLOGIST STOPS THE CONSTRUCTION.”**

—Mairin Balisi  
Postdoctoral research fellow at La Brea Tar Pits