

When did pre-modern humans begin using fire?

Circumstantial evidence suggests that archaic humans' ability to cook food and consume more calories may have played a pivotal role in the development of much bigger brains as far back as *Homo erectus* more than a million years ago. But hard evidence for when exactly our ancestors fully wielded control of flames has proved elusive. A novel application of a trusty geochemical technique may help answer burning questions about when and where our ancestors made friends with fire.

...

[Paleoecologist Kevin] Uno and colleagues turned to a class of polycyclic aromatic hydrocarbons ([PAHs](#)), a type of aromatic hydrocarbon that is produced when oil, gas, or wood is burned.

...

The team's preliminary findings show elevated PAH concentrations around archaeological sites, whereas soil samples from nearby locations that show no signs of human habitation have lower PAHs—indicating that the fires were contained, not landscape-wide.

Follow the latest news and policy debates on sustainable agriculture, biomedicine, and other 'disruptive' innovations. Subscribe to our newsletter.

[SIGN UP](#)

[This] fits neatly into the timeline for the earliest human use of fire, [anthropologist Richard] Wrangham said. Skeletal changes evident in the fossil record—a shortened gut, smaller abdominal cavity, and larger brains—suggest that archaic humans became obligatorily connected to fire around 1.9 million years ago. "The period this team is investigating is the period in which I would expect to see close associations between human settlements and fire."

[Read the original post](#)