

**A BURNING STORY:  
THE ROLE OF FIRE IN THE HISTORY OF LIFE**

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**ABSTRACT**

Ecologists, biogeographers, and paleobotanists have long thought that climate and soils controlled the distribution of ecosystems, with the role of fire getting only limited appreciation. Here we review evidence from different disciplines demonstrating that wildfire appeared concomitant with the origin of terrestrial plants and played an important role throughout the history of life. The importance of fire has waxed and waned in association with changes in climate and paleoatmospheric conditions. Well before the emergence of humans on Earth, fire played a key role in the origins of plant adaptations as well as in the distribution of ecosystems. Humans initiated a new stage in ecosystem fire, using it to make the Earth more suited to their lifestyle. However, as human populations have expanded their use of fire, their actions have come to dominate some ecosystems and change natural processes in ways that threaten the sustainability of some landscapes.