Colonizing Bryophytes Used as a Post-Wildfire Ecosystem Stabilization Treatment in Montana

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Scientist Henry Grover at the Northern Arizona University School of Forestry defines fire-moss colonization as the growth of the common moss species Bryum argenteum, Ceratodon purpureus, and Funaria hygrometrica following high-severity wildfire events. Although wildfires occur naturally and stimulate land regeneration, they have detrimental impacts upon the soil, living organisms, and hydrologic function of an ecosystem. Due to their unique properties, the fire moss species may be an effective post-wildfire ecosystem restoration tool to stabilize soils and stimulate native vegetation growth. By cultivating fire moss species in a simulated post-wildfire environment, observing existing populations, and interpreting expert opinions, this project demonstrated the effectiveness of fire mosses in restoring an ecosystem's ability to foster plant life following a severe wildfire event.

Awards Won: