

Forest Health Research Program Grantee Webinar:

Frequent Fire in California Chaparral Reduces Post-Fire Shrub Regeneration and Native Plant Diversity

Ashley Grupenhoff, PhD, Cal Poly San Luis Obispo



Wednesday, February 14, 2024

3:00 pm – 4:00 pm

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Abstract: Fire frequencies in Mediterranean climate zones, like North American chaparral shrublands, are much higher than historical averages. This departure has major implications for biodiversity, leading to exotic invasion and potential type conversion of shrubland to grassland. We studied the impact of increased fire frequency in California’s Interior Coast Range. Surveying fifty-four plots with up to six fires in 30 years, we found a significant reduction in post-fire native woody regeneration and an increase in non-native species dominance with increased fire frequency. Consequently, areas with higher fire recurrence exhibited a more homogeneous landscape, dominated by a similar group of non-native species.



Dr. Ashley Grupenhoff is an Assistant Professor of Wildland Fire Management at Cal Poly SLO, working at the interface of fire ecology research and management across California’s diverse ecosystems. Prior to working at Cal Poly, she completed her Ph.D. in ecology at UC Davis with a focus on fuel treatment efficacy in dry conifer forests. Broadly, she is interested in understanding the impacts of fire on wildland ecosystems, as well as informing management strategies to mitigate wildfire effects.

The Forest Health Research Program is part of [California Climate Investments](#), a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment — particularly in disadvantaged communities.

