

Despite rise in Pacific Northwest fires, critical unburned areas remain

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While increased fire activity has threatened Pacific Northwest forests, University of Idaho researchers have found a silver-lining: the proportion of unburned areas critical for post-fire recovery has remained unchanged.

Arjan Meddens and Crystal Kolden, faculty in the College of Natural Resources, led a team that analyzed nearly 2,300 fires in the Inland Northwest over a 30-year period, from 1984-2014. They examined trends in the formation of unburned islands of vegetation during wildfires in a new study published in the journal *Ecosphere* today.

The Northwest has seen greater [fire](#) activity in recent years, with more fires and larger areas burned, due to warming climate, fire exclusion and land cover changes. Yet, the researchers found that the amount of unburned [forest](#) located inside the fire perimeter, also known as "fire refugia," has kept pace.

"From a conservation perspective, fire refugia are important to maintaining biodiversity, seed sources and overall landscape heterogeneity," said Meddens, a research assistant professor in the Department of Natural Resources and Society. "These areas will likely play a critical role when it comes to forests adapting to climate change by acting as a buffer and providing some habitat for species—a place where these populations can still exist."

"There is tremendous concern that wildfires are becoming more severe,"

said Kolden, an associate professor in the Department of Forest, Rangeland and Fire Sciences. "But our findings indicate that in this aspect they are not."

The next steps for Meddens, Kolden and their colleagues is trying to understand what factors determine why and where fire refugia form, with an eye toward replicating them—which could benefit both land managers trying to protect critical habitat and homeowners who live in, or close to, fire-prone areas.

More information: Arjan J. H. Meddens et al. Spatiotemporal patterns of unburned areas within fire perimeters in the northwestern United States from 1984 to 2014, *Ecosphere* (2018). [DOI: 10.1002/ecs2.2029](https://doi.org/10.1002/ecs2.2029)

Provided by University of Idaho

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