

ALERT

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Study shows grazing encourages cheatgrass growth

March 13, 2020

Panorama of fire devastation



A group of scientists led by Matthew Williamson, an assistant professor in Human-Environment Systems at Boise State University, has found that grazing plays a major role in determining the prevalence of cheatgrass; even in places that

have not burned. Their results suggest that grazing increases the potential for cheatgrass occurrence by 10-20 percent and that more frequent grazing can almost double cheatgrass prevalence when controlling for variation in climate, topography, fire history and site variation. These results highlight the challenges associated with using grazing as a land management tool for reducing fire and cheatgrass spread.

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The invasive, non-native grass has increased the extent and frequency of fire and negatively affected native plant and animal species across the Intermountain West.

The researchers studied 14 years of data from four mountain ranges in central Nevada. This is the first study that evaluated this suite of environmental contributors across such a broad geography using field-collected data.

“The Great Basin is a highly variable landscape. Climate, topography, and land use history all affect cheatgrass. Historically this made comparing across sites or studies difficult. Our new approach allowed us to account for those factors in order to try and find common drivers of cheatgrass and overcome some of those challenges,” said Williamson.

Similar to previous research, the new models indicated that fire is a strong, positive predictor of cheatgrass occurrence and prevalence. Surprisingly, however, cheatgrass remains abundant even when a site has not burned for a long time.

“Many of our land management partners hoped that if a site didn’t burn for 10 years, you’d see cheatgrass drop out of system,” said Williamson. “Our results indicate that hasn’t happened for most of our sites. One reason might be that grazing is still acting on systems even if fire is not.”

Williamson, who previously managed a ranch in Arizona, said the study is a recognition that the status quo for how livestock is managed is unlikely to solve the cheatgrass problem.

“If we want less fire and more native plants, we need to recognize that our current approach isn’t getting us there and that it’s time to start thinking about how we change that approach to sustain the humans and wildlife that call the Great Basin home,” said Williamson.

The journal *Biological Invasions* recently published the group’s study.

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