HIGHLIGHTS

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Targeted Woodland Removal to Recover At-Risk Grouse and Their Sagebrush-Steppe and Prairie Ecosystems
Richard Miller, David Naugle, Jeremy Maestas, Christian Hagen, and Galon Hall

We summarize the key findings reported in this special issue of Rangeland Ecology and Management examining socio-ecological aspects of woodland expansion and management actions to address this threat in sagebrush and prairie ecosystems. Rallying conservation around flagship species, in this case sage-grouse (Centrocercus urophasianus) and lesser prairie-chickens (Tympanuchus pallidicinctus), can help sustain broader ecosystem functions and values, such as maintenance of native plant communities; conservation of non-target sagebrush obligate wildlife; and improved water capture, storage, and release. Reducing top-down threats by partnering within local communities to identify shared goals and collaborative conservation plans are key ingredients to scaling up effective voluntary proactive restoration.

A Hierarchical Perspective to Woody Plant Encroachment for Conservation of Prairie-Chickens
Samuel D. Fuhlendorf, Torre J. Hovick, R. D. Elmore, Ashley M. Tanner, David M. Engle, and Craig A. Davis

The Great Plains grasslands are experiencing many factors that influence ecosystem function, including fire suppression, grazing, and land use conversion. Hierarchy theory is a useful tool to prioritize factors by scale to determine which local factors are constrained by larger-scale processes. From a grouse management perspective, local management focused on grazing and fire has minimal impact on grouse populations unless they are within a broad scale landscape that is relatively unfragmented. The recent primary threats causing rangeland fragmentation are woody plant encroachment and anthropogenic development, which contribute to nearly irreversible fragmentation of the Great Plains and failure to maintain populations of rangeland endemic wildlife.

Mapping Tree Canopy Cover in Support of Proactive Prairie Grouse Conservation in Western North America
Michael J. Falkowski, Jeffrey S. Evans, Dave E. Naugle, Christian A. Hagen, Scott A. Carleton, Jeremy D. Maestas, Azad Henareh Khalyani, Aaron J. Poznanovic, and Andrew J. Lawrence

Invasive woody plant expansion is a primary threat driving fragmentation and loss of sagebrush (Artemisia spp.) and prairie habitats across the central and western United States and ultimately has negative effects on grouse populations. To guide successful conservation programs, we developed high-resolution maps of invasive woody plants across an 11-state region for the purpose of evaluating landscape level impacts, targeting restoration actions, and monitoring restoration outcomes. The maps of conifer and mesquite (Prosopis glandulosa) cover resulting from this study provide the first and most geographically complete, high-resolution assessment of woody plant cover as a top-down threat to western sage-steppe and prairie ecosystems.

Sage-Grouse Groceries: Forb Response to Piñon-Juniper Treatments
Jonathan David Bates, Kirk W. Davies, April Hulet, Richard F. Miller, and Bruce Roundy

A major objective of piñon-juniper (Pinus spp., Juniperus spp.) removal is to restore or maintain sagebrush (Artemisia spp.) habitat for sage-grouse (Centrocercus