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Great Plains Studies, Center for

Spring 2010

SAVING THE WORLD'S GRASSLANDS: AN INTRODUCTION

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Edwards, Richard and Reading, Richard, "SAVING THE WORLD'S GRASSLANDS: AN INTRODUCTION" (2010). *Great Plains Research: A Journal of Natural and Social Sciences*. 1070.

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SAVING THE WORLD'S GRASSLANDS

AN INTRODUCTION

Grasslands cover a large portion of the world's land surface but increasingly suffer from numerous threats. Temperate grasslands are the most endangered and least protected biome in the world (Hoekstra et al. 2005; Henwood, this issue). Grasslands suffer from the twin dangers of seeming to lack charismatic features deserving of protection (the Great Plains, one of the world's great grasslands, has sometimes been dismissed as "the Great Empty" because it lacks mountains or coastal areas) and of being prime land for conversion to crop agriculture. As a result, people converted or destroyed much of the original Great Plains grassland and devastated much of its amazing biodiversity. While estimates differ, it appears that in the northern Great Plains only about 1% to 3% of the original tallgrass prairie remains intact, perhaps 20% to 30% of the mixed-grass prairie, and 40% to 70% of the shortgrass prairie (Bragg and Steuter 1996; Steinauer and Collins 1996; Weaver et al. 1996; Licht 1997). Through this process the nation lost a substantial proportion of the region's biodiversity, although no overall inventory of the loss appears to be available. Much of the surviving grasslands remain in private hands, so private landowners will largely determine the fate of biodiversity conservation on this open, sweeping landscape.

This special issue of *Great Plains Research* is devoted to "Saving the World's Grasslands." It is based on efforts by the Grassland Foundation, World Wildlife Fund (WWF), Denver Zoological Foundation, Center for Great Plains Studies, and other partners to understand the Great Plains better by placing it in the context of global efforts to conserve the world's grasslands. This special issue presents a global perspective in a double sense: The contributions survey conditions in and conservation of some of the world's most important grasslands and are written by an international set of authors, including both foreign and U.S. nationals.

Scientists and others from the United States have contributed greatly to global conservation efforts by developing theory and applications that they successfully implement at home and abroad. Yet increasingly, they also realize that they have much to learn from ideas and practices developed elsewhere. Innovative thinkers such

as Tyler Sutton (president of the Grassland Foundation and winner of *Travel + Leisure's* 2009 Global Vision Award) and Curtis Freese (founder of WWF's Northern Great Plains program) have worked to bring the new ideas to groups and individuals working in the Great Plains. Sutton and others organized a workshop entitled "Grasslands of the World" in Lincoln, Nebraska, in April 2009, to which the authors of the papers in this issue were invited. The authors have expanded and revised their papers to form the body of work now encompassed in this special issue. They present original research, reviews of current grassland status, and models for and examples of grassland and human-community conservation from Namibia, Kenya, Botswana, Brazil, Venezuela, Mongolia, Canada, Mexico, and the United States (See insert map, Plate 1).

The first six papers focus on private lands, and a major theme, especially as the authors discuss the implications of their work for the Great Plains, is the encouragement of biodiversity conservation on privately owned grasslands. Several case studies suggest that successful conservation of nature on private lands requires supporting economically and culturally sustainable communities and enlisting the backing of local people (mainly via economic incentives) for conservation efforts.

Several papers discuss private protected areas—that is, land that is privately owned and managed for conservation and biodiversity protection—as these areas represent an important mechanism for private-lands conservation. Private protected areas include lands owned by all non-public entities, such as nongovernmental organizations and nonprofits, but importantly, they also include private for-profit enterprises. Traditionally, conservationists have thought of protected areas as requiring public landownership, in the form of parks, wilderness areas, wildlife refuges, and so on. But as Jeff Langholz and others report herein, there is a growing movement in several parts of the world for private landowners, including in particular private, for-profit owners, to establish protected areas. Numerous examples of operating private protected areas now exist from which we have begun to get data and experience. Indeed, this new movement is arguably the most vital force in world conservation today.

The relevance of private protected areas to the Great Plains should be evident, since so much of the region is privately owned, and the chances for purchase by public entities (even if it should be deemed desirable) are dim. But as Langholz; Nils Odendaal and Danica Shaw; and Siva Sundaresan and Corinna Riginos report in this issue, the encouraging results from private protected areas provide many positive arguments for this approach. The emergence and apparent success of private protected areas, however, raises two further issues: What qualifies or “counts” as a private protected area, and more substantively, what standards or criteria should apply to them? These issues are addressed by Freese, Dawn Montanye, and Steve Forrest. Richard Edwards and Eric Thompson assess how conservation research and education centers contribute to local economic development.

A second theme evident in the papers in this issue is the compatibility of cattle ranching with biodiversity protection on private protected areas. Indeed, the real lesson is stronger than that. As Almira Hoogesteijn and Rafael Hoogesteijn demonstrate, landowners can often realize mutual benefits from both livestock production and conservation on their properties. In some cases, the operators of private protected areas have decided to phase out their cattle operations, but in many other cases “ranching for conservation” and “conserving for ranching” has proven more beneficial. Conservation can provide an alternate and supplementary income stream for landowners. Whether derived from nature-based tourism, payments for carbon sequestration, or government grants and tax abatements, these additional revenues are usually not tied to fluctuations in livestock prices and costs, so they diversify a rancher’s income stream as well (Freese et al. 2009).

A third theme is the crucial importance of scale to achieving many conservation benefits. Wildlife and flora populations often require large areas to maintain genetic diversity. As applied to private protected areas,

the necessity of protecting large areas typically means that one landowner owns insufficient land to provide the needed size. Here too we see innovation: As described by Odendaal and Shaw; Sundaresan and Riginos; and Hoogesteijn and Hoogesteijn, landowners have joined together to form associations (variously called conservancies, reserves, or preserves) to manage jointly their wildlife and ecology, while typically retaining their ranching or ecotourism activities as separate and independent operations. Such associations allow landowners (jointly) to gain sufficient scale for sustainable management of wildlife (including sustainable hunting harvests) and of watershed and other ecological resources.

Efforts to protect public lands also offer lessons for conserving the Great Plains, and the final three papers take up this topic. Richard Reading, Don Bedunah, and Sukh Amgalanbaatar explore conservation of the vast Mongolian grasslands, and Glyn Maude examines protection efforts for the Botswanan arid savanna. Both papers emphasize the critical role of nature-based tourism in supporting conservation and suggest combining cultural tourism with the development of nature-based tourism in the Great Plains, as this approach has been successful in both Mongolia and Botswana. Reading, Bedunah, and Amgalanbaatar discuss the desirability of changes in grazing management in both Mongolia and the Great Plains. Finally, William Henwood provides a comprehensive assessment of efforts to protect temperate grasslands on public lands throughout the world.

Protecting and sustaining the world’s grasslands and the biodiversity they support is an enormous task. The challenges of effectively conserving grasslands are growing and may seem daunting, yet as the contributions to this special issue demonstrate, opportunities exist for conservation success tied to enhancement of livelihoods in local communities. We hope the novel ideas and innovative approaches presented in the following papers contribute to that great cause.

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The Center for Great Plains Studies,
University of Nebraska–Lincoln,
and
Great Plains Research

wish to thank

The Grassland Foundation

for its generous support of the publication of this
Special Issue
on

“Saving the World’s Grasslands”



Our mission is to advance the creation of protected grassland natural areas and sustainable grassland communities on the Northern Great Plains through research, education and outreach. To help us advance this mission, we publish information and reports, sponsor speakers and organize public presentations, engage public officials, land managers, educators, and business and community leaders in dialogue, outreach, and advocacy, and work to build collaborative relationships with individuals, groups and institutions.

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