



GRAZING THE GRASSLANDS

Large grazers are important allies in managing Grasslands National Park

Grasslands National Park of Canada was established some 20 years ago in southwestern Saskatchewan near the border with Montana. The park is divided into two blocks covering about 900 sq. km. Grasslands NPC protects important biodiversity and natural processes, fulfilling a role in a worldwide network of prairie areas: globally, less than 1% of the temperate grassland biome is included in formal protected areas.



Grasslands National Park of Canada

When the park first began acquiring lands, large animal grazing was excluded. However, managers and scientists agree that some level of grazing on the native prairies is key to ecological integrity. It was recognized that a landscape without grazing was not ideal for native prairie wildlife. "Grazing is a natural disturbance," says Grasslands' Manager of Resource Conservation Adrian Sturch. "It is essential to a healthy ecosystem".

Historically the native prairie wildlife evolved with grazing bison. With the arrival of Europeans, however, the bison all but disappeared from the prairies. As a result, the ecosystem was missing a key ecological process, as many species depend on the kind of disturbance that large grazers create.

Consider two of Grasslands' bird species at risk, for example – Sprague's pipit and McCown's longspur. They both benefit from grazing because the different species prefer grasses of different heights. Both can do well on a patchy grasslands landscape with a variable pattern of grazing at different intensities. It is a matter of understanding and then managing the grazing to maintain a balanced and diverse ecosystem.



Sprague Pipit
© Robert Koktan

Today, the park is bringing back large grazers. They will reintroduce a grazing regime to the park, with bison as the preferred species, and use fire to help restore the prairie. Prescribed fire, like grazing, can renew the native flora and fauna. These natural processes should particularly benefit the park's 15 designated species at risk.

The best grazing regime

But exactly what grazing regime are best? The park staff are conducting a sweeping experiment to find the answers. They have introduced grazing cattle to nine parcels of land within a remote area in Grasslands, allowing grazing at various intensities so that researchers can determine what works best. How does each regime affect prairie habitats and species composition over the long term? By gradually reintroducing grazing in a controlled setting, researchers can conduct an experiment over a long time and a very large area.

Parks Canada has re-introduced grazing cattle to nine parcels of land within Grasslands National Park © Ashley Wruth, Parks Canada



The grazing study, by supplying data over many years, will help park managers modify park management as necessary to benefit native species. This on-going process is called adaptive management. Managers can regularly assess how the ecosystem is faring, choosing suitable grazing regimes for varied landscapes within the park. Most importantly, aspects of the grazing experiment will inform park managers in formulating ecological grazing objectives on a park wide scale.

The grazing study will guide Parks Canada in eventually reintroducing bison to the park where appropriate. But using bison in the study was impractical. The nine study pastures are smaller than bison require for year-round use. Also, the potential stress on the bison would be significant; cattle are more accustomed to being handled.



Grasslands NP is working with other federal partners and the Government of Saskatchewan to support ranchers and regional pasture managers, who are important stewards of the land © Karen Smith-Fargey, Parks Canada

Fitting into the landscape - part of a bigger whole

Over the long term, the Grasslands Management Plan calls for the park to replicate aspects of the historical grazing regime. Since the surrounding rangelands are commercially grazed, a natural system within the park will add some balance to the ecosystem and "increase the ecological integrity of the whole," says Adrian Sturch.

Trading lightly

Working within a natural system meant that our staff had to find low impact ways to monitor the large grazers. Instead of using motorized vehicles, staff ride horseback to conduct daily patrols to maintain fences and ensure the cattle have water and stay within the grazing areas.

The vast grazing experiment depends not only on Parks staff, but also on the cooperation of federal agencies and the Government of Saskatchewan. They are working with us to support ranchers and regional pasture managers, who are important stewards of the land. As well, the grazing study has opened doors to researchers like the University of Manitoba's Dr. Nicola Koper. With her graduate students, Dr. Koper is studying how grazing intensity affects the grassland songbird population.

To involve locals and visitors, the park invites volunteer 'citizen scientists' to assist in monitoring and data collection. Field days, community presentations and tours are also in the works. The project shows "what you can achieve by working together," says Karin Smith-Fargey, GNP Communications Outreach Officer.

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