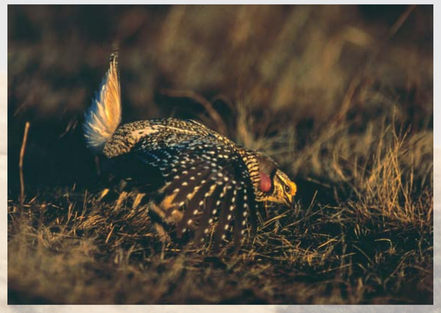
Grassland Vegetation Inventory (GVI)
A Multi-Species Conservation Strategy for Species at Risk in the Grassland Natural Region of Alberta

Introduction

To effectively manage multiple species at risk at a landscape level it is necessary to determine the species present, their habitat requirements, habitat conditions and availability as well as land uses within the area. Initially, the baseline data gathered from wildlife surveys, range health and detailed vegetation inventories is used to develop a landholder specific management plan. In the long term, the data collected will provide the baseline to measure the effects that enhancements and management changes will have on wildlife habitats and populations, particularly those related to species at risk. Inventories and monitoring allow MULTISAR (multiple species at risk working group) to gauge which areas are most valuable for species at risk and if any land uses present a threat to that habitat and/or species.



Sharp Tail Grouse Photo by ACA

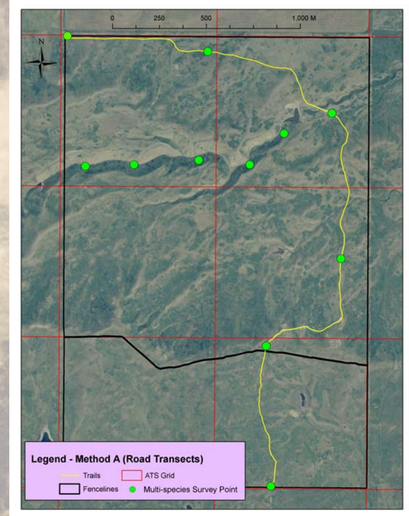
Field Work Photo by ACA

What is MULTISAR?

The MULTISAR conservation program is a cooperative initiative between the Alberta Conservation Association (ACA), Alberta Sustainable Resource Development (ASRD), and the Prairie Conservation Forum (PCF). MULTISAR collaborates with landholders to maintain and enhance species at risk habitat in Alberta's Grassland Natural Region.

Change in survey methods over time

Road and Riparian Transects

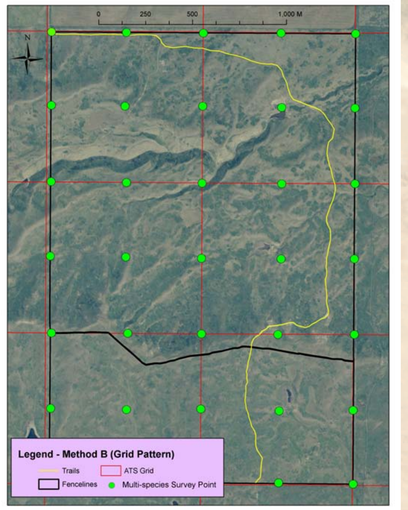


This depicts how road transects were conducted for birds. Observations of non-avian species were also documented. Transect lengths varied depending on the amount of accessible trail available.

Transects were traveled by vehicle with stops approximately 800 m apart. At each stop, the observer would step out of the vehicle to listen for birds and visually scan for 5 minutes. All birds identified within 800 m were recorded.

Limitations include poor coverage, use of vehicles disturbed species, and data collected is not correlated to habitat type.

Grid Transects

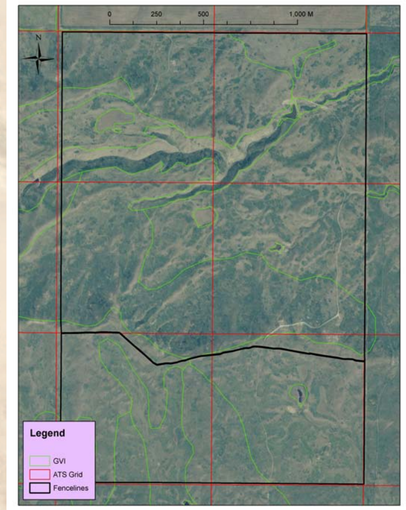


Multi-species surveys involved surveyors walking designated transects. Transects varied in length and were spaced approximately 400 m apart with stops made every 400 m.

At every stop a GPS location was recorded and a 5 minute wildlife survey was completed in which birds, mammals and herptiles seen or heard within 200 m were recorded. Any pertinent habitat information such as burrows, trees, nests, leks, ephemeral ponds or shrub complexes was also noted.

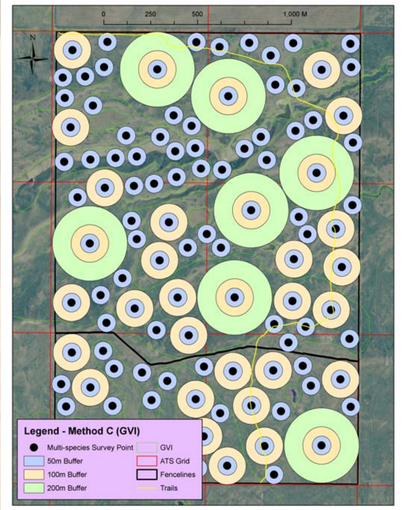
Limitations of this method include some habitat types may have been missed, several points fall on fence lines and direct comparison of habitat types and species presence was limited.

GVI stratified surveys



Polygons from the GVI are overlayed on the landscape as survey units. Additional units are delineated by fence lines, individual pastures and naturally occurring boundaries/ barriers. 200m buffered survey points are then randomly generated by ArcGIS and placed within all GVI polygons ensuring no overlap. Survey points with 100 m and 50 m buffers are then used to fill in remaining areas of the polygons. Any GVI polygon that could not accommodate the smallest survey point size (50 m) are not surveyed. Keeping survey points within the GVI polygon boundaries increases the potential for future correlation between the range health and wildlife found in each polygon.

GVI stratified surveys



MULTISAR's point count survey method requires the observer to record all wildlife species detected within the assigned buffer as well as the distance at which species are detected.

Surveyors walk to pre-determined survey points and complete a five minute wildlife survey in which all birds, mammals, amphibians and reptiles seen or heard within the buffers are recorded.

This method allows for better coverage of the landscape, and the GVI polygons allow for stratification of survey units and better represent "potential" habitat for individual species.

Conclusions

As opposed to the road and grid transect wildlife survey methods, GVI has allowed refinement of the survey methodology to enhance the value of the data collected by linking it to specific habitat types. This allows us to look at correlations between habitat types and species presence/absence and further refines the beneficial management practices and recommendations we provide to landholders through the MULTISAR project. We hope this information positively adds to the conservation of Alberta's species at risk.

MULTISAR funding partners include:

Canadian Natural Delivering the Future · ALTALINK · Canada

References

Saunders, E. J. 2001. Population estimate and habitat associations of the long-billed curlew (Numenius americanus) in Alberta. Alberta Sustainable Resource Development, Fish and Wildlife Division, Alberta Species at Risk Report No. 25, Edmonton, AB.