

**Alberta Conservation Association**  
**2023/24 Project Summary Report**

**Project Name:** Pronghorn Movement Enhancement – Fence Trials

**Wildlife Program Manager:** Doug Manzer

**Project Leader:** Paul Jones

**Primary ACA Staff on Project:** Paul Jones and Amanda MacDonald

**Partnerships**

Alberta Fish & Game Association

Bushnell Corporation

Cabela's Canada

Canadian Forces Base Suffield

Government of Alberta

National Wildlife Federation

Safari Club International – Northern Alberta Chapter

TD Friends of the Environment Foundation

The Nature Conservancy

**Key Findings**

- Over the course of this project, we have contributed to the greater body of science by publishing 11 papers in peer-reviewed journals, two book chapters, and two papers in the Pronghorn Workshop proceedings. We have also given 53 presentations, 15 newspaper/magazine article interviews, and 16 live interviews.
- Our research influenced the management of pronghorn and deer across North America. Our results directly changed the wildlife friendly fencing standard for pronghorn to now be a double stranded smooth wire on the bottom with a minimum of 45 cm (18 inches) from the ground and for deer where the standard is now to have the top wire height no more than 102–107 cm (40–42 inches).

- Our published work has increased the awareness of the effects that fences and roads have on prairie wildlife to a global audience and has directed conservation benefits for pronghorn and many other species.

## **Details**

The proliferation of fencing that followed cattle ranching since the 1880s throughout the Canadian prairies poses a serious barrier to ungulate movement. We initiated a project in 2011 to: 1) increase awareness within the scientific community of the potential impacts fences have on wildlife and ecosystem function, and propagate the need for a new discipline called “fence ecology”; 2) evaluate the effectiveness of different bottom wire heights and modification techniques to enhance pronghorn and deer movements across fences; and 3) increase the profile of pronghorn, the proposed new disciple of fence ecology, and the need for wildlife friendlier fencing standards through publications in peer-reviewed journals and presentations.

Our paper on fence ecology published in 2018 has served as an awakening for the conservation community to examine the impacts of fences on wildlife and ecosystems. Since our paper was published, there have been several papers examining the impacts of fences on wildlife. It is now understood that fences are a major linear anthropogenic feature on the landscape, whose combined linear extent surpasses that of roads. We are now starting to understand how fences affect movement, migration, survival, and behaviour for several species ranging in size from amphibians to elephants.

Our evaluation of fence modifications has resulted in new wildlife friendlier fencing standards. It is now widely acknowledged that a double stranded smooth bottom wire set at 45 cm (18 inches) and a top wire height of 102–107 cm (40–42 inches) is the recommended practice across western North America. While the standards for fencing have changed, the volume of existing fences on the landscape remains an obstacle for wildlife movement. Continued efforts to implement these new standards will be required to alleviate the impacts that fences have on wildlife.

We have increased the profile of pronghorn and grassland conservation through publishing our work in peer-reviewed journals. This has elevated the impact of these efforts across North America and, made it defensible and accessible to a global audience. We have published 11

papers in peer-reviewed journals, two book chapters, and two papers in the Pronghorn Workshop proceedings. We have given 53 presentations and 31 interviews (both print and live). Our commitment to increasing the profile of pronghorn has elevated Alberta Conservation Association's profile across North America as being a leader in pronghorn conservation and fence ecology.

## Photos



Photo 1. Pronghorn showing the negative effects of an interaction with a fence. Photo: ACA



Photo 2. Group of pronghorn using a known crossing site to move from one side of the fence to the other. Photo: ACA



Photo 3. Elk calf checking out the camera at a fence crossing site. Photo: ACA