

## MULTISAR FUNDING — THANK YOU TO ALL OUR LONG—TERM SUPPORTERS



Conserving Alberta's Wild Side

**Alberta Conservation Association (ACA)** has been a long-term funder and original founding partner of the MULTISAR project back in 2001-2002. Funds from ACA are made up of hunting and fishing levies and go towards ACA staff delivery of the project along with detailed assessments and habitat enhancement work.

**Government of Alberta (GOA)** has been a long-term funder and was an original founding partner of the MULTISAR project back in 2001-2002. GOA staff are directly involved in the project and yearly funding is provided to the Prairie Conservation Forum to help run the project.



**Prairie Conservation Forum (PCF)**, through support from the GOA, has supported the MULTISAR project since 2009. Funding is used to help deliver the project through range and wildlife biologist contracts, assessments, habitat enhancement work, and education.

**Environment and Climate Change Canada (ECCC)** has been a long-term funder of the MULTISAR project going back to 2002. Funds have been used for detailed assessments on properties and implementation of numerous habitat enhancements throughout the years. Funds have been provided through programs like Species At Risk Partnerships on Agricultural Lands, Habitat Stewardship Program for Species at Risk, and Nature Fund Canada.

This project was undertaken with the financial support of the Government of Canada.  
Ce projet a été réalisé avec l'appui financier du gouvernement du Canada.



**Department of Fisheries and Oceans (DFO)** have supported our MULTISAR West project area for the past six years. These funds are specific to work related to Bull Trout and West slope Cutthroat Trout. Funds have been primarily used on assessments and habitat enhancements tied to those two fish species.



**Canadian Cattle Association**

**Canadian Cattle Association (CCA)**, through support from ECCC, has supported the project since 2015. These funds have gone towards staffing, assessments, and habitat enhancements with focus on the SE Corner of Alberta starting in 2021.

**Minister's Special Licence** funding supported the MULTISAR Project for the past four years and has been used primarily for habitat enhancements along the east slopes and porcupine hills area.



### IT'S NOT JUST FUNDING... IN-KIND SUPPORT MAKES A BIG IMPACT

Several utility companies have aided the project over the years with equipment, labour, and materials, especially when it comes to hawk pole installation for the Ferruginous Hawk.



The main in-kind support we receive though is from landowners that we collaborate with and develop relationships with over the years. Their dedication to stewarding the land and managing these valuable habitats along with their willingness to work with us is why we have been able to receive funding and work on the grasslands for the past 23 years. We look forward to these continued relationships and working with landowners to provide tools and resources for their operations and wildlife habitat they manage.

# UPCOMING RESEARCH PROJECT TO ASSESS HABITAT CONNECTIVITY FOR PRONGHORN

BY AMANDA MACDONALD, ALBERTA CONSERVATION ASSOCIATION



A research initiative set to launch in December 2024 aims to shed new light on the movement patterns of one of the grassland's most iconic species—the pronghorn. This project, led by Alberta Conservation Association (ACA), will utilize GPS satellite collar technology to assess habitat connectivity and provide crucial insights for the conservation of these prairie specialists.

Pronghorns, often referred to as "antelope," are known for their remarkable speed and extensive seasonal migrations. However, their habitats have been increasingly fragmented by human activities, such as infrastructure development and energy resource expansion. These disruptions threaten the animals' ability to move freely across their historic ranges, potentially endangering the long-term survival of pronghorn populations.

Set to launch in December 2024, ACA is spearheading a research project to assess the movement patterns of pronghorn.

Information acquired from the new study, Pronghorn Winter Survival and Migration project, will help ACA build on insights gained from a similar study conducted between 2003 and 2011. A select number of pronghorn will be affixed with GPS collars that can track their movements, with the goal of monitoring individuals over a four-year period. The collars, which use satellite technology, will gather detailed data on the animals' travel routes, stopover points, and habitat use across their northern range. By following the pronghorn as they move across the prairies, researchers hope to identify critical migration corridors that are essential for maintaining habitat connectivity.

## WHAT TO EXPECT

Prior to capture ACA will be scouting for pronghorn herds to gain a general idea of where the animals are wintering. Animals will be captured utilizing a helicopter-netgun methodology, so residents may notice increased helicopter activity in their area as the capture crew is working. Captures are planned for the winter to reduce any impacts of landing a helicopter on the ground, as it should be frozen.

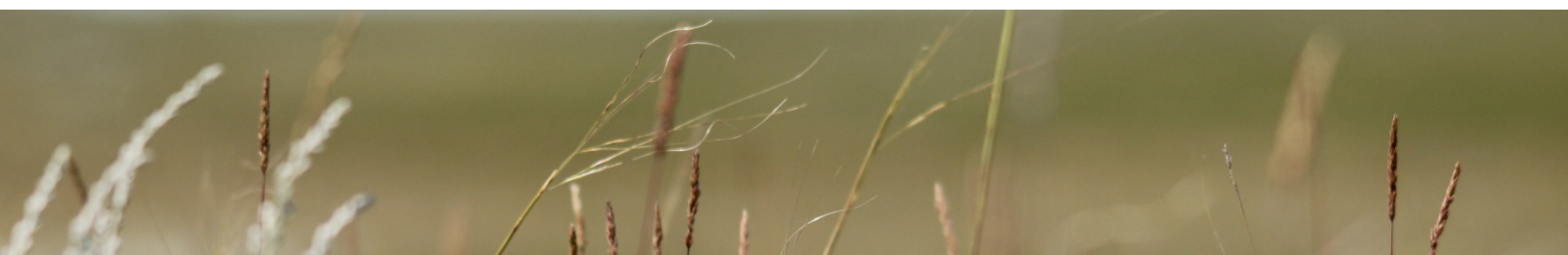
Although researchers intend for captures to occur early December 2024, this is a weather dependent activity with the potential to extend into January 2025. All captures will be completed during daylight hours.

## COMMUNITY INVOLVEMENT

Local communities and landholders will play an important role in the success of the project. ACA will be conducting landholder outreach throughout November to have a pre-approved list of landholders willing to grant access for captures. These landholders would then be notified closer to the capture date if the capture crew is expected to land on their property. The capture crew will not be landing or capturing pronghorn on private or lease lands without prior consent from the landholder.



Pronghorn will be captured using helicopter-netgun methods and then collared so ACA can gather data about pronghorn movements on the landscape.



# UPCOMING RESEARCH PROJECT TO ASSESS HABITAT CONNECTIVITY FOR PRONGHORN (CONTINUED)

## ANIMAL CARE

The well-being of the pronghorn captured is of utmost importance to both researchers and the capture crew.

An animal care contingency plan has been thoughtfully developed to minimize negative impacts on pronghorn. This plan outlines conservative chase and handling times, along with other best practices and standards for captures. One best practice implemented is the inclusion of two “drop-off” mechanisms in the collar design. If one drop-off fails the other can be utilized, minimizing any potential future handling of the animals to retrieve collars.

## POST CAPTURES

ACA aims to gain long-term data on pronghorn behaviour and movement patterns. The collars are designed to minimize discomfort for the individuals and will provide researchers with a wealth of information to assist with pronghorn management in the province.

The research team is optimistic that the project will yield results that will benefit not only pronghorns but also the ecosystems they inhabit. The study, set to last for seven years, with three consecutive years of capturing and collaring pronghorn, promises to be a landmark effort in understanding the complex relationship between wildlife and the landscapes they call home.



From the project, ACA hopes to gain further insight into pronghorn movement and patterns on the landscape.

*Any landholders interested in learning more about this project or the potential to be involved are welcome to contact Amanda MacDonald (403-894-9651; [Amanda.MacDonald@ab-conservation.com](mailto:Amanda.MacDonald@ab-conservation.com)) with ACA.*

## BADGERS IN ALBERTA — MORE THAN JUST BIG HOLES

BY NIKKI HEIM



Badgers can knock a Richardson’s ground squirrel population down 50% while in an area.

Badgers can knock a population of squirrels down by 50% while in the area. For a landowner, such a reduction in ground squirrels could mean fewer ground squirrel holes as well as the retention of rangeland vegetation. For example, a few badgers capable of preying on over 300 ground squirrels in a summer season equates to 1 AUM (Animal Unit Month) of feed for one cow–calf pair. For these reasons, the presence of badgers can be an indicator of range health and resiliency. However, little is known about badger populations across the Prairie Provinces and for many landowners and operations, coexisting with badgers can feel like a challenge.

Do we care about badgers? A surprisingly common question in Alberta. While badgers are well-known for their big holes and apparent risk to livestock and machinery, the benefits badgers provide to grassland and range health is often unknown or remains underappreciated. Badgers are a carnivorous member of the weasel family, or family Mustelidae. Badgers are considered a fossorial mammal, spending much of their lives underground. Badgers excavate extensive burrow networks, or setts, used for safety, shelter, resting, birthing and rearing their young, and for storing food. These burrows are an essential part of a badger’s life history but also function as a natural disturbance, enhancing soil structure and composition, increasing water infiltration, soil aeration, nutrient cycling, and organic decomposition rates, as well as supporting vascular plant and soil invertebrate diversity.

As strict carnivores, badgers prey on a variety of smaller species but prefer small mammals, such as ground squirrels.

Badgers are estimated to consume 2–3

*To find out more about existing considerations to mitigate the impacts of badgers, how to limit disturbance to badgers during sensitive periods, and to provide new ideas and fill knowledge gaps about badgers in Alberta and across the prairies, please go to <https://www.prairiebadger.ca/>.*

# MONITORING PROGRAM FOR SWIFT FOX UNDERWAY IN ALBERTA

BY STEFANO LICCIOLI, ALBERTA ENVIRONMENT AND PROTECTED AREAS

Swift fox (*Vulpes velox*) is a small carnivore species of concern across much of its range, which has been subject to extensive restoration efforts for over 30 years. Swift fox was once widely distributed across the short- and mixed-grass prairies of the Great Plains but experienced significant declines typically attributed to predator eradication campaigns and land conversion in the late 1800s. Although swift fox populations have rebounded in some portions of their range due to natural recolonization, the latest assessment indicated that swift foxes were surviving in only 44% of their historic range in the US and 3% in Canada, and large gaps between occupied portions remain. The species is currently listed as Endangered under the Alberta *Wildlife Act* and as Threatened under the *Species at Risk Act* (SARA).

In 2023, Montana Fish Wildlife & Parks commenced a state-wide occupancy study to determine distribution, occupancy, and connectivity of swift fox populations across Montana to assess changes in species distribution and amount of natural recovery throughout its range. With the Alberta population being part of a contiguous, larger metapopulation, ongoing efforts in Montana provided a unique opportunity to survey a wide-ranging meso-carnivore at the appropriate regional scale. Therefore, in 2024, Alberta Fish & Wildlife Stewardship developed and started implementing a monitoring program for swift fox, mirroring study design, sampling framework and methodologies applied in Montana.



A monitoring program for swift fox was initiated in 2024 in southeastern Alberta by Alberta Environment and Protected Areas.



A swift fox investigates a trap station, which are equipped with a trail camera and scent post.

The study design employs a 7.5 x 7.5 km grid overlaid to the study area, and cells are classified as High (>50%), Medium (26-50%) and Low (<25%) habitat quality for swift fox based on the amount of grasslands as derived by Grasslands Vegetation Index. Cells with <50% agricultural or grasslands (combined) were excluded. A total of 154 cells were identified as priority for 2024-2026, with potential to expand the survey further west in 2026-27, depending on results obtained in both Alberta and Montana.

Within each grid cell, 4 camera trap stations (i.e., trail camera and scent post) are deployed, with one station in each sub-quadrant, and at least >1 km apart. Stations are set to maximize the chance of detecting the species, preferably along pathways used for travel (fence lines, game/two-track trails, intersections) within open, flat short-grass or mixed-grass prairie habitat or open fields, avoiding rugged features, drainages, and bodies of water. This work takes place between September and March, with each camera trap station deployed and active for 14 consecutive

nights – after which, cameras are retrieved and rotated to other locations. This population survey focuses on Crown land (i.e., leased land, Provincial Grazing Reserves), upon conversation with leaseholders. Occasionally, stations may be placed on private land, such as properties that are partners of the MULTISAR project or other landowners who are willing and interested in supporting and participating in this survey.

This work will help assess swift fox occupancy and distribution within the province, while informing decisions for the recovery of a species at risk that is negatively impacted by habitat fragmentation, and whose continued presence attests to the intactness and the functioning of the remaining short and mixed grassland ecosystems. Furthermore, biologists will explore the feasibility of using the same data to estimate abundance of other species of conservation interest such as American badger, which are currently lacking data to inform population status and listing process.

*Any landholders interested in learning more about this project or the potential to be involved are welcome to contact Stefano Liccioli (403-795-4013; Stefano.liccioli@gov.ab.ca) with Alberta Environment and Protected Areas.*

# SPECIES PROFILE: WESTERN BUMBLE BEE

**DESCRIPTION:** Western Bumble Bee (*Bombus occidentalis*) is a medium-sized (1–2 cm) bumble bee found in western Canada. The appearance of *B. occidentalis* is variable, but all individuals have a yellow band on the thorax above the wind base, and the end of the abdomen is nearly always white. Williams *et al.* (2014) describes 5 different morphological types for queens and 14 total morphological types for workers and males. There are two genetically distinct subspecies of *B. occidentalis*, including the *occidentalis* subspecies (found in British Columbia, Alberta, and Saskatchewan) and the *mckayi* subspecies (found in British Columbia, Yukon, and Northwest Territories).



**STATUS:** *Bombus occidentalis* is listed as Threatened in Canada. This species was recently added to Schedule 1 of the Species at Risk Act in December 2023, though it was federally assessed as Threatened in May 2014. *Bombus occidentalis* has not been assessed in Alberta.

The western bumble bee is a Threatened species in Canada due to a number of factors, including habitat loss and pesticide use.

**HABITAT:** *Bombus occidentalis* is a habitat generalist and can be found in dry prairie grasslands, open coniferous or deciduous forests, subalpine and montane meadows, riparian areas, and more. *Bombus occidentalis* typically establishes nests underground, making soil conditions important. This species has a short tongue, and thus it is best suited to forage on open flowers with short corollas, though it feeds on a variety of species.

**THREATS:** *Bombus occidentalis* was once considered one of the most common bumble bees in western Canada, but it is now disappearing from the landscape. In Alberta, the proportion of this species found in samples declined by 80% from 2000 to 2010 (COSEWIC, 2014). *Bombus occidentalis* has numerous threats driving its decline, including parasites introduced by managed bumble bee populations (typically used in greenhouse operations), loss of native habitat to agriculture and urbanization, neonicotinoid pesticide use, and climate change. Competition with managed honey bees may also impact *B. occidentalis*, especially in areas where food is already limited.



## BENEFICIAL MANAGEMENT PRACTICES FOR BEES



- Conserve or restore native habitat wherever possible – this includes places like road-side ditches, marginal farming land, city parks, and lawns.
  - Manage land to promote diverse flowering plants, while minimizing soil disturbance and compaction (e.g. moderate grazing, prescribed burns).
  - Only use pesticides when and where they are absolutely necessary.
  - Avoid introducing honey bees into areas where food resources are already limited, such as urban centers or highly agricultural areas.
- Control and reduce weeds, but make sure there are native flowering plants to replace their absence.

## REFERENCES:

COSEWIC. 2014. COSEWIC assessment and status report on the Western Bumble Bee *Bombus occidentalis*, *occidentalis* subspecies (*Bombus occidentalis occidentalis*) and the *mckayi* subspecies (*Bombus occidentalis mckayi*) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 52 pp. ([www.registrelep-sararegistry.gc.ca/default\\_e.cfm](http://www.registrelep-sararegistry.gc.ca/default_e.cfm)).

Williams, P.H., R.W. Thorp, L.L. Richardson, and S.R. Colla. (2014). Guide to the bumble bees of North America. Princeton University Press. 115 pp.



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Canadian Cattle Association



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CANADIAN ROUNDTABLE  
FOR SUSTAINABLE BEEF  
TABLE RONDE CANADIENNE  
SUR LE BOEUF DURABLE

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Canada



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