



## Greater Short-horned Lizard

Photo: © Erik Enderson



### Scientific Name

*Phrynosoma hernandesi*

### Taxon

Reptiles

### COSEWIC Status

Special Concern

### Canadian Range

Alberta, Saskatchewan

### Reason for designation

In Canada, this species occurs in several scattered localities in grasslands of southern Alberta and Saskatchewan. New localities have been documented since the previous assessment, and the distribution of the species is no longer considered to be severely fragmented. Range-wide threats include habitat modification by invasive plants and increased vulnerability to summer droughts and freeze/thaw events associated with climate change. Approximately 70% of the population occurs in Grasslands National Park, but subpopulations outside the protected area, including all subpopulations in Alberta, are subject to additional threats including agriculture, oil and gas drilling, increased predation because of habitat modification, and other human developments. Current trends in population size and habitat quality in Alberta are unknown. The species is close to meeting criteria

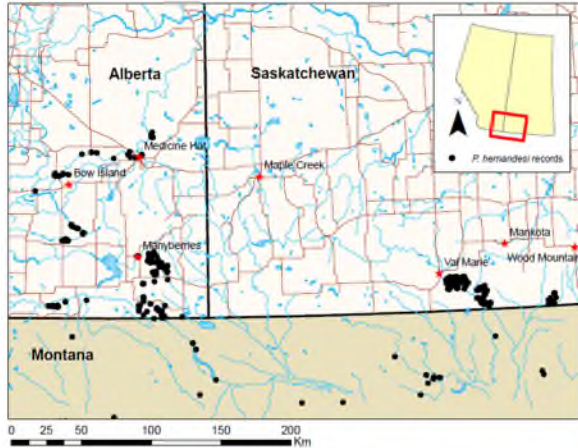
for Threatened because of its small range, inferred and projected reduction in habitat quality, its patchy distribution, and its specific habitat requirements.

### Wildlife Species Descriptions and Significance

Greater Short-horned Lizard (*Phrynosoma hernandesi*) is the only species of lizard found in Alberta and Saskatchewan. The species occurs farther north than any other iguanid lizard species globally. It is the most widespread and generalist of all horned lizard species. Greater Short-horned Lizard is a small (snout-vent length of approximately 69 mm for adult females), dorso-ventrally flattened lizard with a fringe of protruding scales along the sides, and an array of 'horns' and a deep hornless notch across the back of the head. The blotched dorsal colouration and ability to remain motionless provide the lizards an excellent camouflage, helping protect them from predators and allowing them to ambush prey.

### Distribution

Greater Short-horned Lizard is distributed throughout the North American west, from central Mexico to southern Alberta and Saskatchewan. The lizards occur in distinct habitat areas, four in Alberta and two in Saskatchewan. In Alberta, the species occurs in scattered habitats along the South Saskatchewan River, within the Manyberries Hills, along the Chin Coulee/Forty Mile Coulee complex, and along the Milk River and its associated tributaries. In Saskatchewan, Greater Short-horned Lizard primarily occurs within the East and West Blocks of Grasslands National Park.



Distribution of Greater Short-horned Lizard in Alberta, Saskatchewan, and northern Montana.

Source : COSEWIC. 2019. COSEWIC assessment and status report on the Greater Short-horned Lizard *Phrynosoma hernandesi* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 68 pp.

## Habitat

In Canada, Greater Short-horned Lizard generally occupies sparsely vegetated, south-facing slopes with friable (crumbly) soils and patchy vegetation cover. This pattern provides shade from the sun, as well as overnight shelter. Dense vegetation may inhibit movements. The species occurs throughout the slopes, from the valley and gully bottoms, mid-slope, and into adjacent upland grasslands.

## Biology

Greater Short-horned Lizard is a generalist insectivore, consuming ants as well as crickets, beetles, spiders, and other arthropods. In Canada, females give birth to live young annually in late July or early August. Clutch sizes vary widely but may exceed 10 offspring. Females tend to establish a series of small territories within a larger home range during the summer active period and move relatively short distances. Activity has been recorded between April and November. Greater Short-horned Lizard overwinters approximately 10 cm below the soil surface.



Photo: © Larry Powell

## Population Sizes and Trends

Since the initial agricultural development in the early 20th century, declines in habitat connectivity, quality, and quantity have occurred. There are no clear trends in subpopulations that have been monitored since the 1980s. It is likely that subpopulations in at least some localities have been extirpated during the past two decades (e.g., localities near Medicine Hat). Continuing occupancy has not been recently confirmed at all localities, particularly along the South Saskatchewan River and Milk River. New localities near Manyberries Hills have been recorded, which suggests that not all occupied habitat has been documented. The population size is poorly known but probably exceeds 10,000 adults.

## Threats and Limiting Factors

The long-term viability of the Greater Short-horned Lizard population in Canada is threatened by a variety of anthropogenic activities. Threats include habitat modification by invasive plants, droughts and fluctuations in snow cover associated with climate change, increased predation due to habitat modification, land conversion into agriculture, oil and gas drilling, and recreational activities. The species' distribution in Canada is likely limited by a combination of historical habitat conversion and physiological and behavioural restrictions, acting in conjunction with climatic barriers.

## Protection, Status and Ranks

In Canada, Greater Short-horned Lizard is listed as Endangered on Schedule 1 under the Species at Risk Act. In Alberta, the species is listed as Endangered in Schedule 6 of the provincial Wildlife Act. In Saskatchewan, the provincial Wildlife Act prohibits unauthorized killing, disturbance, collection, harvest, capture, sale, and export of wildlife without a permit. The species is not protected in the United States or internationally. In Alberta and Saskatchewan, Greater Short-horned Lizard has been assigned the subnational rank of S2, indicating that the species is considered imperilled or at high risk of extinction. A global rank of G5 indicates that on a range-wide scale, Greater Short-horned Lizard is considered secure, or common, widespread, and abundant.

Source : COSEWIC. 2018. COSEWIC assessment and status report on the Greater Short-horned Lizard *Phrynosoma hernandesi* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 63 pp.

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