



Bullsnake

Photo: © Leagh Vermeylen



crosses the head in front of the eyes, a dark band from the eye to the angle of the jaw, and a dark vertical spot below the eye. Bullsnake is non-venomous.

Distribution

Bullsnake's range in North America extends from Alberta and Saskatchewan in the north, through central United States to northeastern Mexico in the south. In Alberta, Bullsnake occurs from north and west of Drumheller along the Red Deer River coulee system, distributed mainly in the mixed grassland region in the Lower Red Deer, South Saskatchewan, and Milk river valleys. In Saskatchewan, the Bullsnake's range extends east to the Big Muddy Valley and north to the South Saskatchewan River.

Scientific name

Pituophis catenifer sayi

Taxon

Reptiles

COSEWIC Status

Special Concern

Canadian range

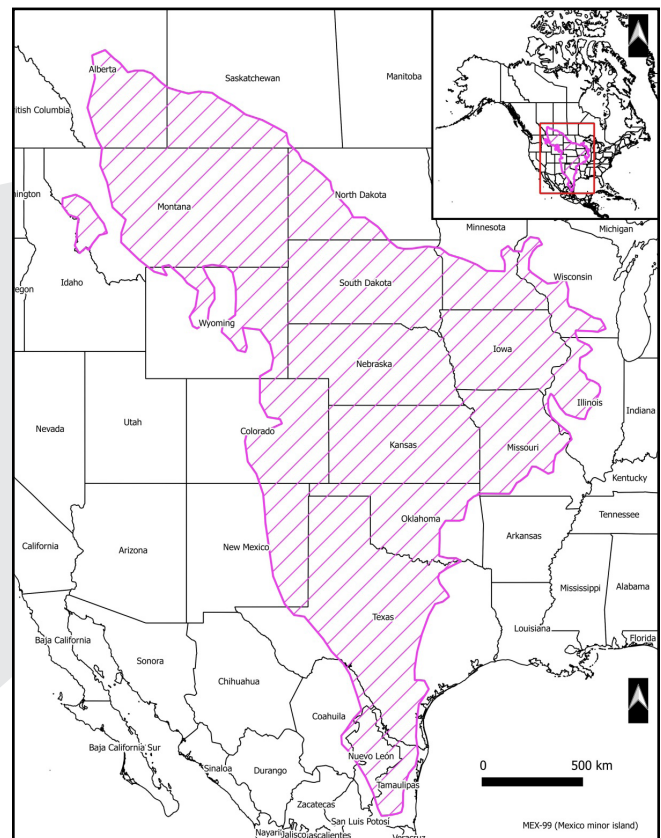
Alberta, Saskatchewan

Reason for Designation

Like other large snakes, this species is affected by habitat loss and roadkill and may become Threatened if threats are not mitigated. The species relies on communal wintering dens, which may be scarce on the landscape. Although the severity of threats across the species' range is not fully understood, the impact of those threats is potentially significant. The species is especially vulnerable to increased mortality because of its low abundance, late maturity, and low rate of productivity.

Wildlife Species Description and Significance

Bullsnake is one of three subspecies of gophersnakes in Canada. It is one of the largest species of snake in Canada, occasionally exceeding 2 m in length, and it has inspired countless reptile enthusiasts. Adults are yellowish with black, brown, or reddishbrown blotches on their dorsal and lateral scales. Distinguishing features include a narrow scale at the tip of the snout that is raised above the nearby scales, a dark line that



North American distribution of Bullsnake. Adapted from Conant and Collins (1998) and Kissner and Nicholson (2003).

Habitat

In Canada, Bullsnake occurs in short- and mixed-grass prairie, commonly in association with brushy and sandy areas and around badlands along major river valleys. The snakes often use mammal burrows

for foraging, protection from predators, moulting of the skin, temperature regulation, and as hibernation sites. Bullsnares hibernate communally, often with other snake species, in mammal burrows, slump blocks, meander scarps and fissures, sinkholes, and rocky outcrops on slopes with warm exposure. For nesting, female Bullsnares excavate burrows or modify existing mammal burrows in sandy or friable soils on south-facing bluffs within the coulees and gorges of river valleys.

Biology

Mating generally occurs in May, soon after the snakes emerge from hibernation. Females may reproduce annually or every other year, laying an average of 16 eggs in June or July, with hatchlings emerging from mid-August to mid-September. The age at sexual maturity is unknown; however, the closely related Great Basin Gophersnake probably does not reproduce until four years of age. Generation time for Bullsnares in Canada is probably approximately eight years. Bullsnares are active during the day, foraging mainly on small mammals. They are adept climbers and will also eat birds and bird eggs.

Population Sizes and Trends

Insufficient data exist to document abundance or population trends. Declines from historical levels are inferred from road mortality and habitat loss. Habitat in the grassland regions has been lost and degraded throughout the range of the Bullsnake in Alberta and Saskatchewan. However, the snakes appear to persist across their wide Canadian range.

Threats and Limiting Factors

Threats to the Bullsnake include road mortality, certain types of agricultural practices and overgrazing, and alteration of prairie habitat from oil and gas drilling. The impact of these threats on Bullsnares overall is considered to be low. Additional threats determined to have overall negligible, but potentially important local impacts on Bullsnares include the following: persecution; human disturbance in the form of recreational and military activities; natural system modifications such as wildfires; residential and commercial development; and pollution, specifically from rodent control measures. Potential threats with unknown impacts on Bullsnake include landslides (slumping) and habitat alteration by invasive plants.

Protection, Status, and Ranks

Globally, NatureServe lists the Bullsnake as secure (G5T5), with subnational rankings of S3 (vulnerable) for Alberta and S4 (apparently secure) for Saskatchewan. In Alberta, Bullsnake is designated as a sensitive species by Alberta Environment and Parks, with the population described as stable or possibly declining. Bullsnares are afforded general protection as native wildlife under the Alberta and Saskatchewan wildlife acts; hibernation sites are seasonally protected under the provincial *Wildlife Act* in Alberta. In national and provincial parks, the species and its habitats are protected under the *Canada National Parks Act*, *The Provincial Parks Act* (Alberta), and *The Parks Act* (Saskatchewan).

Source: COSEWIC. 2017. COSEWIC assessment and status report on the Bullsnake *Pituophis catenifer sayi* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 34 pp

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