

Slither and Swoop: Snakes and Bats on the Prairie

by Tara Mulhern Davidson



Tera Edkins gets up close and personal with a bull snake.

Photo courtesy of Tera Edkins

When one ponders prairie wildlife, the first species that comes to mind may be the speedy pronghorn, perhaps the majestic bison, or even the beleaguered sage-grouse. Two Saskatchewan biologists however, are working hard to put snakes and bats on the prairie conservation map, literally and figuratively, through their research at the University of Regina. They were on hand at the recent Native Prairie Appreciation Week (NPAW) tour in Maple Creek, Saskatchewan in June to discuss their fascinating subjects.

Shelby Bohn, an MSc candidate with the University of Regina's Department of Biology is studying prairie bats. "I'm interested in bats because there is just so much about them that we don't know yet. I really like getting to solve some of those mysteries," said Bohn, who studies silver-haired bats. Bohn's research looks at pregnant and lactating female bats to determine how they save energy

during the summer to raise their pups in a relatively short time. "We think that they are probably choosing trees that are at a comfortable 'room temperature' so that they don't have to spend energy on heating or cooling themselves," explained Bohn, adding that they might share their accommodations with relatives.

Tera Edkins focuses her time on species that slither. Edkins is also an MSc Candidate in the Department of Biology at the University of Regina and is passionate about prairie snakes. "They're amazing in their ability to live in such a wide range of habitats and conditions. With our freezing winters, you wouldn't think of snakes as a group that could persist here, but they do. To me, that's just incredible," explained Edkins. She is evaluating the movements and habitat selection of the bullsnake, a species Edkins says there is relatively little known about in Canada. "I am looking at what kinds of habitats bullsnakes like to use, where they spend the winter, and where they move during the active summer season," Edkins stated, who added that she is also assessing human development and activities that influence bullsnakes.

Both biologists are studying species that aren't always visible or even that popular on the prairie, however they are a valuable part of the ecosystem. "Just like many other animals, they act as both predators and prey and, ultimately, help to keep the ecosystem functioning," said Edkins.

Bohn indicated that bats face some significant challenges in Saskatchewan and elsewhere. Certain hibernating bats, including the little brown bat and the northern long-eared bat, both listed as Species at Risk in Canada, are susceptible to a disease known as White-nose Syndrome (WNS). The disease, caused by an invasive fungus, isn't in Saskatchewan yet but Bohn said it is continuing to spread across North America. "These hibernating species are seeing population

declines in the parts of their range where the disease is present," explained Bohn. "Other bat species, including the silver-haired bat, are vulnerable to fatality from wind turbines," said Bohn.

The biggest challenge facing prairie snakes, including the bullsnake, is habitat loss due to urban development and agriculture, cited Edkins. Saskatchewan is home to nine different snake species, two of which are Species at Risk including the eastern yellow-bellied racer and the prairie rattlesnake, listed as Threatened and Special Concern respectively. "For both of these species, their listing is mainly due to habitat loss," explained Edkins. "The bullsnake, on the other hand, is listed as data deficient, meaning there isn't enough information on this species to place them or to tell if they are, in fact, threatened. This is something I hope my research will be able to address," Edkins added.

Edkins admits that snakes are not always popular and have even faced persecution. "Human persecution can be a big problem for snakes. Many people dislike snakes and may even demonstrate a hostile attitude toward them when they're encountered," she explained, adding that their slight resemblance to the prairie rattlesnake doesn't help their cause. Edkins is very keen to create public awareness and education about snakes, particularly teaching people to respect these species. "Many people often think that bullsnakes, or other snakes, are aggressive animals, always looking for a fight," said Edkins. "In fact snakes will try to avoid dealing with humans at all costs," she adds. "They are actually very hard to find!"

Bohn agreed that bats have also suffered a bad public image over the last few hundred years. "But we're working to change that too," she countered. "There has been amazing interest in our work,"

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Bohn said. "One of the places we go to catch bats is near a campsite. People always ask us what we're doing and we usually end up having a conversation about bats, which is really cool," Bohn added.

The respective work that Bohn and Edkins are doing is not only providing insight into species that are sometimes misunderstood, but it is creating a culture of interest and appreciation for two fascinating groups of prairie animals. 🦇



*Shelby Bohn examines a bat.
Photo courtesy of Shelby Bohn*