It’s the long weekend and you and your family have decided to spend some time at your usual lakeside retreat. As you exit the main highway and leave behind the busy traffic, you begin to relax on the familiar and less busy secondary highway to the lake. It is now dark and you turn on your high beams for extra light. You pass the familiar traffic sign warning you of moose for the next 10 km, but in the many years you have driven this road, you have never spotted a moose and absentmindedly disregard the warning. A half hour later, as you continue to scan the road and ditches while driving, you think you see a darker mass on the roadway, so you slow down. It is not until you are less than a couple hundred metres away that you see long legs and recognize the shape of a moose. You immediately hit your brakes and direct your car to the flanks (rear) of the moose, clipping its hind quarters as it moves off the road.

You are shake and your family was frightened by the sudden emergency manoeuvre, so you pull over to calm yourself, check your family, and check the vehicle. You realize how lucky all of you were since a head-on collision with the moose would likely have crushed the entire upper portion of your car and could have been fatal. As you think over the incident, you realize that you never saw the tell-tale reflection of light in the moose’s eyes that you usually see with other animals. You wonder why since if you had, you might have recognized the dark mass as of an animal sooner. Nonetheless, you are grateful that you were able to maintain control of your vehicle and avoid crashing into an animal that weighs as much as a small car.

How to reduce collisions and injuries with moose

Due to the height and mass of a moose, drivers should be aware of additional precautions if faced with colliding with this large animal.

- Review Tips to help prevent collisions with wildlife and Tips on how to respond to animals on the road and carry the Road Safety Tips cards in your glove compartment for easy reference.

- Increased collisions with moose occur during the fall rut and hunting season as moose move to different areas for mating or to avoid hunters.

- Moose are attracted to salt and other minerals often used in de-icing; therefore, collisions can increase at times just after heavy snowfall periods in the winter or in the spring.

Road Safety and Moose

A TRAFFIC INJURY RESEARCH FOUNDATION PROJECT

Make safe driving second nature
Did you know?

Moose are excellent swimmers and can swim up to 10 km/h. They can feed on underwater plant life and are able to dive to depths of over five metres to reach food. Moose also use swimming as a means to cool themselves during hot days and to rid themselves of insects. On land, these large animals can reach up to speeds of 55 km/h over short distances.

What the above two options mean is that as a driver, you must pay close attention to your driving environment, be aware of other road users and road hazards, and make the best decision for you and other road users in order to respond to a potential impact with moose/elk. Check out Road Safety and Wildlife for more information and download the tips described above.

What characteristics of a moose increase collision risks?

Several risks to colliding with a moose make moose-vehicle collisions especially dangerous. Moose are one of Canada’s largest mammals, weighing upwards of 500 kg – nearly half the weight of most cars, a third the weight of sport utility vehicles (SUVs) and other large size vehicles, and outweigh motorcycles altogether. Hitting a moose can be similar to hitting a small car.

The impact of a moose-vehicle collision is made far more dangerous by the fact that moose have long legs, thus the bulk of their body mass sits high above the ground. When a vehicle hits a moose, the bumper, engine, and built-in crumple zones of the car that are intended to absorb the majority of an impact only hit the thin legs. The full weight of the moose’s upper body instead impacts the windshield and roof of the vehicle.
vehicle. In these types of collisions, the moose may crush the roof and windshield or may travel through the windshield directly into the driver and passenger area which may be fatal to its occupants. After the impact, vehicle occupants then may be at risk of being hit by kicking legs and a flailing head and antlers if the animal survives.

Watching for moose at night time is made difficult due to their height. Most people are able to see light reflected in the eyes of animals in the dark. However, the eyes of moose are generally too high up for vehicle headlights to produce reflections. Combined with their darker brown, grey, or black colouring, moose can be very difficult to see at night.

Roads often divide animal habitats thus act like a barrier to movements between the various needs of wildlife such as water and food sources or migration and mating activities. Wildlife will cross roads to reach these destinations; however, their natural defences against predators are not very useful to protect them from or to avoid vehicles. Furthermore, at night, bright headlights mask the large vehicle behind them. Compounding this, moose have very poor eye sight. They largely rely on their sense of smell and hearing to interpret the world around them and are therefore less likely to see clearly the potential threat of a fast approaching vehicle.

With respect to the flight-or-fight response nature of animals, moose tend to be aggressive and are more likely to charge a vehicle if it deems it a threat. Thus, honking or flashing your lights while in close proximity to a moose may instead incite them to attack and run towards the vehicle as opposed to run away from it.

**When and where are collision risks highest with moose?**

**When?** Seasonally, collisions with moose are most likely to occur in the fall, the spring, and high travel periods in the summer seasons. During the fall, male moose are very active when rutting – when male moose compete for dominance in order to mate. The hunting season also causes large movements of moose when humans invade moose habitats, causing moose to disperse and travel to areas they normally would not in order to evade people. Male moose are also more aggressive during this time, thus pose a heightened risk as they are more inclined to fight perceived threats including vehicles. During the spring, female moose are active as they migrate to areas to give birth to their young. Once the calf is born, the mother and baby continue to be active while foraging.
During a typical 24-hour period, moose are active from dusk through the night until dawn as they forage for food. For Canadian drivers, given that peak commute times are near dawn in the summers and at dawn and dusk during the winters, and this combined with reduced visibility at dawn and dusk, the likelihood of colliding with a moose increases during these periods.

**Where?** Moose are found across all of Canada, including non-native environments such as Newfoundland where the animal was introduced in the late 1800s. Although it is possible to come across a moose in almost any region of Canada, their lower numbers make encounters with them less likely than other wildlife. That being said, the damage and injury they can inflict is substantial and drivers should heed all warning signs and take necessary precautions.

In terms of habitat, moose are found near lakes, muskegs, and streams. They are also especially attracted to saltwater pools that accumulate next to roads as a result of winter road de-icing.

**More information**

Find out Why wildlife may be found on or near roads, What to do after a collision, and Tips if a collision with wildlife is unavoidable by checking out the [Road Safety](#) web page of the Wildlife Roadsharing Resource Centre website or download the [handout/card](#) to carry in your glove compartment.

**Project Information**

The Wildlife Roadsharing Resource Centre (WRRC) is a centralized source of information, research, education, resources, and many other features to answer any questions you may have regarding wildlife-vehicle collisions.

Visit [wildliferoadsharing.tirf.ca](#) to learn more.

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