

Alberta's Sharp-tailed Grouse



Through the Seasons



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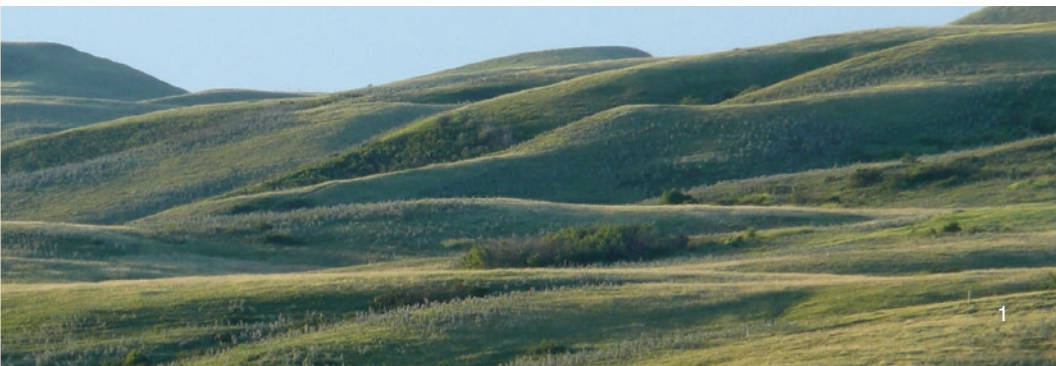
Alberta's Sharp-tailed Grouse

Through the Seasons

The sharp-tailed grouse is a native game bird that makes its home in the prairies, parklands and forest openings of Alberta. For much of the year the sharp-tailed grouse is a quiet, well-camouflaged bird; however, its spring shenanigans are undoubtedly one of the most impressive spectacles in Alberta's natural history calendar.

Unfortunately, sharp-tailed grouse numbers are dwindling in parts of Alberta. With your help, Alberta Conservation Association hopes to reverse this trend so you and future generations can continue to appreciate and enjoy this fascinating species.

This booklet provides biological information on the sharp-tailed grouse and offers simple suggestions about how you can improve habitat for the sharp-tailed grouse on your property.



Sharp-tailed Specifics

Sharp-tailed grouse (*Tympanuchus phasianellus*) are chicken-like birds that favour relatively dry, open grassland with a patchwork of tree and shrub cover. They can be found throughout Alberta, where suitable habitat exists.



What's in a Name?

A short and pointed tail, with two central tail feathers that extend beyond the others, gives the sharp-tailed grouse its common name.

Spotting a Sharp-tailed Grouse

A speckled plumage of tan, brown, beige, black and white helps sharp-tailed grouse blend into their grassy environment. Many people's first experience with this grouse is of a small flock of birds bursting into flight from thick grass, seemingly out of nowhere. Once in flight, they reveal conspicuous white underwings, rump and abdomen.

Dressed to Impress

Male and female sharp-tailed grouse sport bright yellow-orange combs over each eye. Males have a distinct purple-coloured sac on each side of their neck, which they inflate during courtship displays while flaring their eye comb. Like flipping a switch, these vibrant colors can be hidden behind drab feathers at the slightest threat of danger.



The Lek

Alberta's Favourite Dancer

Sharp-tailed grouse perform spring courtship displays on communal “dancing grounds,” called leks. Here males compete for breeding opportunities by displaying their “dancing” ability to females. Most activity on the lek occurs in the early morning just before sunrise and for a few hours afterwards.

The males’ energetic display includes fluttering wings, rapid foot stomping and spinning in tight circles — reminiscent of wind-up toys. The most dominant males court females with low cooing sounds and by strutting around them with inflated air sacs on their neck and fanned tail feathers. It is nearly a winner-take-all form of competition, as only a few of the males are selected as mates by the females.

Leks are found in areas with dry open ground, where dancing activity keeps the vegetation well-trampled. Leks are used over several weeks beginning in late March and are often used for years, even decades. They are an important part of sharp-tailed grouse life, and the loss of suitable lek habitat can be a limiting factor for sharp-tailed grouse in Alberta.



Most leks in Alberta have 10 to 20 dancing males, but some counts have recorded up to 45 males. Leks range in area from 5- 20 m².

SPRING

Let the Dancing Begin

Male sharp-tailed grouse gather on the lek in late March. In April the females arrive, sparking increased displaying by the males. Peak attendance by females on the lek occurs between mid to late April in much of Alberta.

Once they have selected a male, hens breed once and then seek out a place to nest, usually in late April to early May.



Can you spot the hen in this well-camouflaged nest?



Of Nests and Eggs

Hens prefer nest areas with dead, dry grasses remaining from the previous year's growth. The well-concealed nest is often at the base of a small shrub such as buckbrush, rose or wolfwillow. Most nest sites are within 2 km of the lek.

Sharp-tailed grouse lay an average of 12 eggs per clutch. If they lose their clutch to predators or poor weather, they often re-nest at least once.

The chicks hatch after an incubation period of 21 to 23 days. The brood remains in the vicinity of the nest for 3 weeks. Chicks can fly short distances by the time they are 7 to 10 days old.



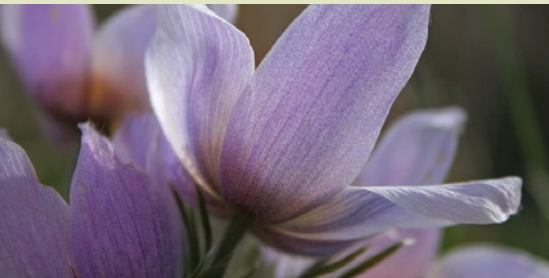
Don't Cut In On a Dance

Leks are an integral part of the lifecycle of prairie grouse. Active leks should never be approached, as any disturbance to the birds may disrupt breeding activities and result in the abandonment of the lek. The locations of active and historical leks are of great interest to grouse biologists. To report a lek, contact Alberta Conservation Association.

Good Habitat = Nesting Success

Nesting success in Alberta is higher in areas of good quality continuous native habitat. Success is lower where habitat is fragmented by agricultural land uses. This may be because of an increased number of predators that are adapted to changes in habitat resulting from agricultural activities. Also, natural habitats usually offer better concealment and protection from predators than agricultural areas.

The height and density of grasses is also important as denser, taller grasses result in increased nesting success.



Eat Your Spring Greens

In spring, adult grouse eat the leaves of plants such as dandelions, crocus, avens and shrubs. Insects, seeds and grasses are also consumed. Young chicks eat mostly insects and some green plants.

Natural Advantages

Maintaining native plant food sources on your property is one of the best things you can do to help sharp-tailed grouse. By retaining low wet areas and looking after the health of riparian habitat on your land, you will provide a good insect food source for young birds.

SUMMER

Summer Lifestyles

Sharp-tailed grouse chicks stay with the hen until late summer. In their first weeks, the brood prefers tall grasses which provide insects and concealment from predators. As summer heats up they move into shady areas of thicker cover, where it is available.

Male sharp-tailed grouse do not play any role in raising the chicks, but settle in to a quieter lifestyle, foraging together in small flocks.



Light to moderate cattle grazing is compatible with maintaining healthy grasslands and good sharp-tailed grouse habitat

It's Not Easy Being a Chick

The first month of a chick's life is difficult. Only half of the chicks that hatch will survive to 30 days old. Prolonged cold, wet weather and predators take their toll.

Accidental mortality from haying, barbed wire and trampling in areas of high cattle densities, can occur. Chicks are particularly vulnerable to such activities before the third week of July, after which they are finally able to fly well.

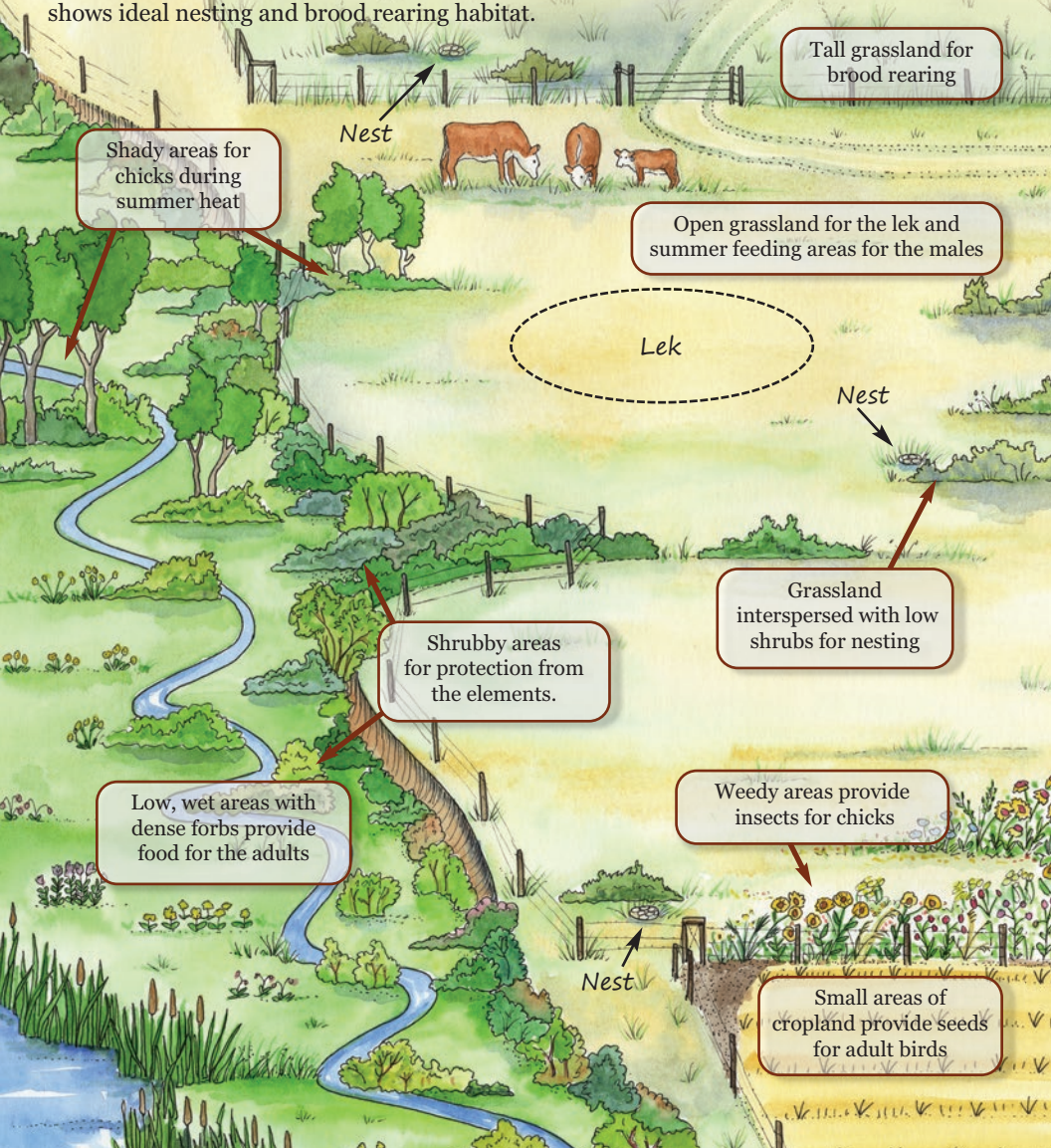
Collisions with vehicles on an ever-expanding network of roadways over much of their range are an additional threat.

The Fire Bird

Native North Americans called the sharp-tailed grouse "Fire Bird" because of their reliance on fires to keep their habitat open in wooded areas. Suppression of natural fire in parkland and boreal areas reduces the amount of open grassland available to sharp-tailed grouse.

Home on the Range

Broods roam through an area ranging from 20 to 200 ha (50 to 500 acres) with an average of 70 ha (172 acres) — approximately a quarter section in size. This illustration shows ideal nesting and brood rearing habitat.



Spray Wisely

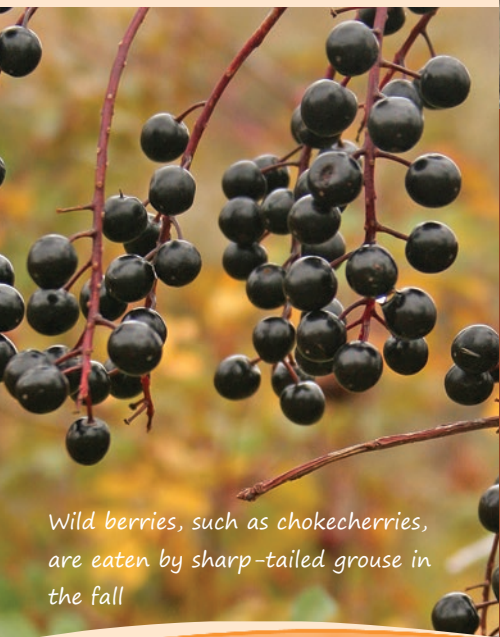
Limit the number of pesticides used on your crops and pasture and avoid them altogether where possible. By killing insects you eliminate a valuable food source for chicks and adults. If you have to spray, avoid spraying under windy conditions and keep spraying at least 3 m from field edges.

FALL

Hunting for Grouse

Sharp-tailed grouse were an important food source for native North Americans and they continue to be a popular game bird for hunters today.

Alberta manages the harvest of sharp-tailed grouse by setting the season dates and bag limits. Information on hunting regulations can be obtained by contacting your local Alberta Fish and Wildlife Division office.



Wild berries, such as chokecherries, are eaten by sharp-tailed grouse in the fall

Encore Performance

Shorter days stimulate the male grouse to start dancing on the lek again, although this autumn performance is not as intense as in the spring.

Autumn performances likely occur because the day length is similar to that in March and April. Some prairie birds, such as meadowlarks, sing in the fall for the same reason.

Fall “dancing” may also be a way of setting up territories in advance of the breeding season.

Good Neighbours

Where good sharp-tailed grouse habitat is maintained, many other wildlife species thrive alongside the grouse. Areas of healthy native grassland mixed with shrubs support songbirds that are rare or sensitive to changes in habitat, such as Brewer's sparrow, lark bunting, western kingbird, common nighthawk, bobolink and Sprague's pipit.

The Ups and Downs of Sharp-tailed Grouse

While exact population numbers are not known, there is a feeling that sharp-tailed grouse have decreased significantly in numbers over the past 40 years. This trend is supported by lek counts, hunter surveys, aerial counts and Breeding Bird Survey data.

Declining numbers are the result of a reduction in the quality and quantity of sharp-tailed grouse habitat, particularly the loss of quality nesting and brood-rearing habitat.

The conversion of grassland into cropland is a detriment for many ground-nesting birds, including sharp-tailed grouse. The fragmentation of native grasslands by road networks, power lines, and fences can lessen habitat quality and may heighten the abundance and hunting efficiency of predators.



A “Sensitive” Species

Each species of grouse in Alberta is given a general status rank by the Government of Alberta. These indicate which species are *At Risk* or *May Be At Risk* of disappearing from Alberta as a result of human activities or natural events; and which species are *Sensitive* to these activities and events. Species that are abundant and widespread are considered *Secure*. In Alberta, the sharp-tailed grouse is listed as *Sensitive*.

Save Some for the Birds

Leaving small willow or aspen patches within fields and along field edges provides cover and food sources for sharp-tailed grouse during the fall and winter. If you are able to, keep field edges and low-lying areas uncultivated to provide cover and feeding opportunities for grouse.

WINTER

Of Buds and Berries

Hard winter weather means a change in behavior for sharp-tailed grouse rather than a change of location. With green plants and insects gone, grouse shift their diet to buds and berries. The buds of aspen, willow and cottonwood and the berries of rose, snowberry, wolfwillow, saskatoon and chokecherry are favoured. In agricultural areas, leftover grain can be a welcome food source during winter.

Over the winter months one of the challenges for sharp-tailed grouse is ensuring they can find food and eat enough of it to maintain adequate body fat supplies and energy levels until spring.



Rose hips



Cottonwood buds

Chokecherries

Wolfwillow

Long Underwear and Winter Boots

Sharp-tailed grouse are hardy birds and physically adapted to Alberta's cold winters. They are equipped with several layers of insulating body feathers to trap heat. They also have feathers that reach all the way down to their toes, acting like warm stockings. Additional feathers around their nostrils help them to avoid breathing in snow and ice.

Toughing it Out

While some bird species migrate to escape Alberta's winter, sharp-tailed grouse stay put. Alberta's native grouse rely on their winter adaptations to survive. Non-native game birds, such as ring-necked pheasants and gray partridges are not very well adapted to Alberta's extreme climate and they do not fare as well.

Snow Roosting

Like most grouse species, sharp-tailed grouse burrow into snow to reduce heat loss. Snow provides a very effective barrier against wind and cold. After plunging into the snow, they tunnel a metre or two from the point of entry. They spend the entire night under the snow and they will also snow roost during the day. Once settled, they can rest or sleep easy, relatively safe from predators.



Safety in Numbers

The biggest winter challenge for sharp-tailed grouse is staying away from hungry predators, such as owls, hawks, coyotes and foxes. Predator avoidance is one reason why sharp-tailed grouse flock together. With several birds in a group, a predator is more likely to be spotted quickly, giving the birds time to escape.



Thickets, Brush and Groves are Good

In addition to insulating plumage, good winter habitat can help grouse keep warm. Vertical and horizontal layers of shrubs and trees act like extra blankets for the birds, protecting them from the cooling effect of winter winds. Keeping thickets of rose, chokecherry and trees intact will help grouse make it through the winter.

Living with Grouse



Providing and Improving Habitat

Wildlife habitat improvements can be simple, inexpensive, and rewarding. There are many actions you can take that will benefit sharp-tailed grouse and at the same time protect, if not enhance, your bottom line. You can help Alberta's sharp-tailed grouse by actively managing native habitat so that it provides food and cover for them. This may involve making small adjustments to your current land management practices.

Good habitat provides nesting cover, food and protection from weather and predators



Small Things can make a Big Difference

- Control cattle grazing in riparian habitat with electric or permanent fencing to protect trees and shrubs. Graze riparian areas periodically to reduce excessively tall vegetation that is not used by sharp-tailed grouse.
- Areas of tall grasses are important for broods. Heavy grazing should be avoided.
- Coulees are key sharp-tailed grouse areas, especially in agricultural areas. Avoid winter feeding or heavy grazing in coulees.
- Fence collisions often kill grouse. Use markers on the top two wires, especially where the fence is hidden from view, such as the crest of knolls.
- Steer recreational activities and oil and gas development away from known leks.
- Retain your native grasslands and shrubby areas and keep them healthy.
- Avoid grazing native grasslands between mid-March and mid-June.

Habitat improvements do not have to be complicated or time-consuming. Alberta Conservation Association can walk you through some simple steps to improve or restore native habitat on your land that will benefit a wide variety of species, including sharp-tailed grouse.





Help Conserve Alberta's Wild Side!

Biologists monitor and survey sharp-tailed grouse to better understand their behavior, population, distribution and relative abundance. This information helps determine hunting bag limits, but also helps to recover the species in areas where it has declined. You can contribute to this science by working cooperatively with biologists and organizations such as Alberta Conservation Association. Together we can make a difference and conserve Alberta's wild side!

Contact Us

Alberta Conservation Association

Our Mission: ACA conserves, protects and enhances fish and wildlife populations and their habitats for Albertans to enjoy, value and use.

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