

# Grand Teton

John D. Rockefeller, Jr., Memorial Parkway

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## Elk Ecology & Management



"Often from out of the forest, as I sit here writing, comes the long clear bugle note of a bull elk... These are the adventures of the wilderness, the scenes which make up Nature's great mosaic. Why do we so delight in the wild creatures of the forest, some of us so passionately that it colors our whole life." Elk biologist Olaus Murie, *Wapiti Wilderness*.

### Jackson Hole Elk

About 95,000 elk live in the Greater Yellowstone Ecosystem, a twelve-million acre area that includes Grand Teton and Yellowstone National Parks, the Rockefeller Parkway, seven national forests and two national wildlife refuges. Elk residing in Grand Teton and the Rockefeller Parkway are part of the large Jackson Hole elk herd. Management of this herd, including elk within the park and parkway, is intensive and involves a reduction program in the form of an authorized hunt.

### Physical Characteristics

Elk are ungulates (hooved animals) that belong to the deer family. Elk have a dark head, neck and legs, with a lighter brown body and a cream-colored rump. Wapiti, the Shawnee name for elk, means white rump. Females have a darker body than males.

Mature males have branched antlers; yearling males, called spikes, usually have unbranched antlers. Antler size indicates dominance, nutritional state and genetic fitness. Females do not have antlers. Large males shed their antlers each year during March and April, while younger bulls shed their antlers later in the spring. New antler growth begins within a week after shedding and continues until late August when the antlers are full-sized. At peak rate of growth in summer, antlers may grow one inch per day. During the growth period, antlers are

covered with "velvet," a fuzzy tissue composed of blood vessels that nourish developing antlers. Antlers are cartilage-like during formation, but later become bone. When antlers are fully developed, bulls rub the velvet off by scraping their antlers against saplings.

- Adult males weigh 550 – 800 pounds; adult females weigh 450 – 550 pounds.
- The breeding period, called the rut, occurs from late August to early November.
- The gestation period is 8-1/2 months; calving occurs in late May and June. Usually one calf is born; twins are very rare. Newborn calves weigh 30 – 40 pounds at birth and 200 pounds at the end of their first summer.
- Most elk on the National Elk Refuge are 3 – 10 years old. The oldest elk was a 30 year old female; oldest male was 18 years old.

### National Elk Refuge

Settlement of Jackson Hole blocked traditional elk migration routes and winter range. Elk were attracted to hay that ranchers stored for livestock. Because of conflicts between wintering elk and livestock, the National Elk Refuge was established in 1912 to provide a secure winter range for elk. Today the refuge is comprised of 24,700 acres of land kept largely in native grasses and other plants elk will eat. When snow becomes crusty or too deep, elk are fed pelleted alfalfa hay. Elk stay on the refuge for about six months and are usually fed for about two months. Winter mortality on the refuge is about 1.5%; under more natural wintering situations, up to 20% mortality can be expected depending on weather.

Elk that winter on the refuge spend summers in Grand Teton National Park, the Bridger-Teton National Forest east of the park or in the southern part of Yellowstone National Park.

### Elk Annual Cycle

During autumn males take over harems of females that they mate and zealously guard. Bulls bugle, a high-pitched whistling sound, followed by grunts, as part of the mating ritual. Bugling is a male dominance display that attracts females and states the rank of the male. Rival males respond by bugling back. Bulls may actually spar with challengers, after first demonstrating threat postures, then thrashing the ground with their antlers.

Females enter estrus (breeding receptivity) for a twelve hour period. If they are not bred, estrus may recur up to four times at twenty day intervals. Eighty-five to ninety per cent of females become pregnant each year.

The rut is an intense time for bulls. Dominant males expend a considerable amount of energy and rarely eat. The price for passing on their genes consists of entering winter with their resources severely depleted.

Curing of grasses and snowfall in the high country prompt elk to move from their summer ranges to lower elevations. To reach the grasses they eat, elk paw through snow, so their feeding is hampered by deep or crusty snow. Throughout the fall, elk in Grand Teton follow drainages and ridge lines as they move to wintering

grounds. Many elk winter on the National Elk Refuge at the southern, lower end of Jackson Hole. Migration begins in October and is usually completed by mid-December.

As snow melts in early spring, elk begin to stream off the refuge. They follow leafing-out of vegetation as they return to their traditional summer ranges in higher elevation meadows. Females give birth to calves on their summer range; some may calve during migration. Cows, calves and young males remain in small groups throughout the summer, while older males, their antlers in velvet, form bachelor herds.

Summer is a brief time of plenty. Elk are primarily grazers—they eat lush grasses and wildflowers, although when food is scarce, they will browse on woody shrubs and saplings. Elk eat at dawn and dusk, and spend warm days in the cool shade of forests as they ruminate (chew their cud). At first females leave their nearly scentless spotted calves curled up as they feed some distance away. Within a week or two, calves follow their mothers.

By late summer males' increased testosterone levels have resulted in completion of antler development and the start of the rut. As fall colors peak, the haunting sound of bugling elk fills the air...

## Population Regulation

Female elk are able to begin breeding when they are 1-1/2 years old, but most start breeding at 2-1/2 years of age. Females usually breed every year and have one calf per year until they die, although about 40% of juveniles do not survive their first year. Life expectancy for female elk averages twelve years, but some may live into their twenties. Elk have a high reproduction potential: A ten-year old female may account for five additional living descendants, which is a five-fold increase in the population.

Winter mortality, disease and predation contribute to elk population reduction, as does hunting. Available natural winter range is limited due to human development. The National Elk Refuge is intended to support up to 7,500 elk each winter. In recent years about 10,000 elk have wintered on and near the refuge; about 90% of the Jackson elk herd winters on the refuge and on three state-operated feed grounds in the Gros Ventre River drainage. Some elk winter singly or in small groups scattered throughout Jackson Hole. The Jackson elk herd currently consists of about 16-17,000 elk, although the management objective is 11,000 elk.

## Elk Management Program

The elk population within Grand Teton National Park is jointly managed by the National Park Service and the Wyoming Game and Fish Department. The present boundaries of Grand Teton National Park were established in 1950 by Public Law 81-787. Congress included a provision for managing elk numbers through a special annual elk management program. According to this law, hunters selected to participate in the hunt must have legal Wyoming hunting licenses for special areas 75/76 and 79 and are also deputized as park rangers.

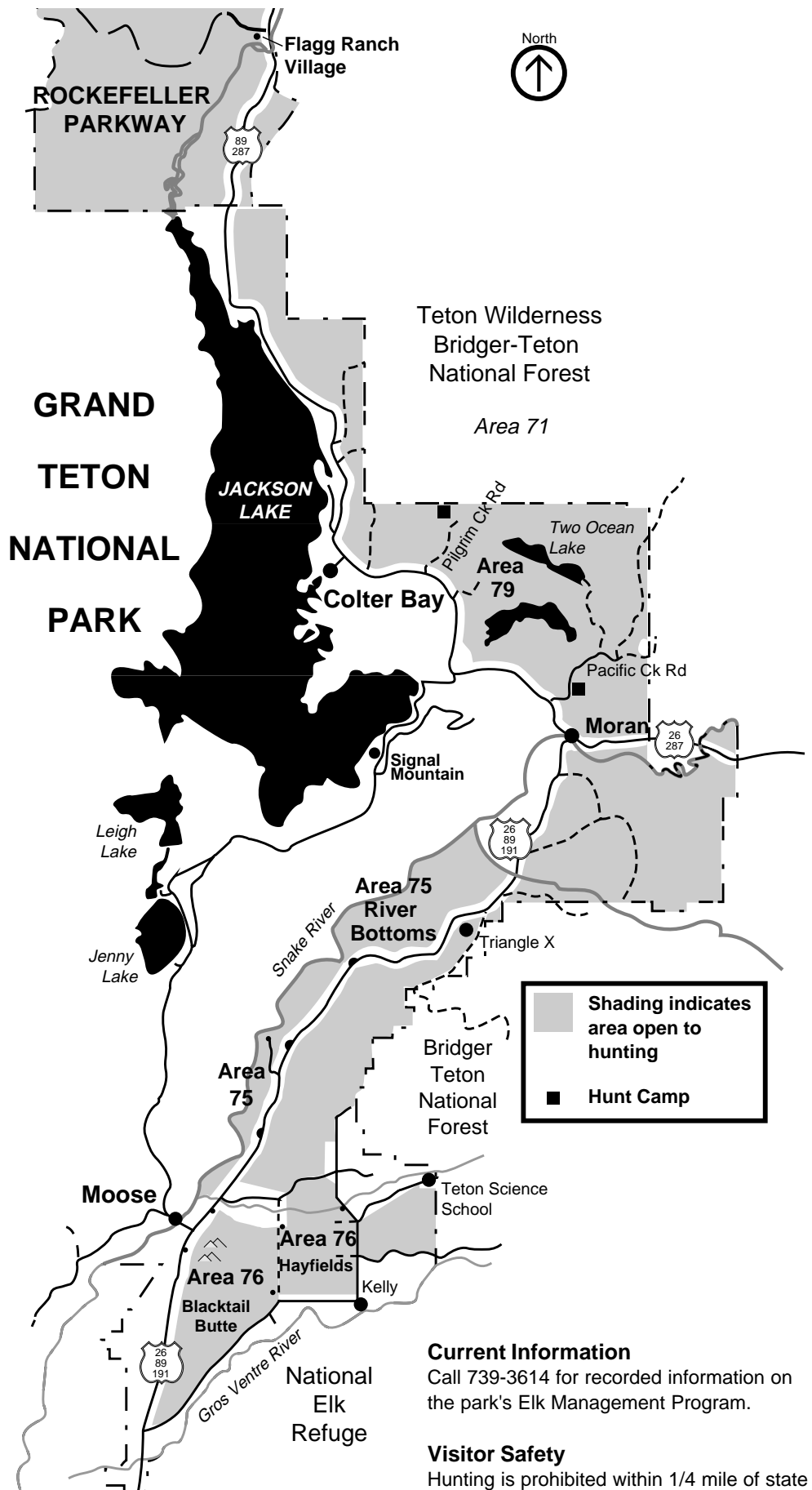
### The Elk Management Program

Hunting occurs in Grand Teton National Park from mid-October through mid-December each year. Between Moose and Moran, legal hunt areas are east of the Snake River. North of Moran Junction, legal hunting occurs east of Highway 89 and throughout the Rockefeller Parkway. See the map for specific areas that are open to hunting. Check at the Moose Visitor Center (open daily 8 a.m. – 5 p.m.) for more details.

Hunt camps are located within the park at Pacific Creek and at Pilgrim Creek; only hunters possessing valid permits for the park elk management program may camp at Pacific Creek, while Pilgrim Creek is also open to those hunters with general licenses. Hunters may not camp elsewhere in the park. Hunters that kill elk are required to hang the meat at least ten feet high from the racks provided in the hunt camps to prevent black and grizzly bears from obtaining the meat.

### Hunting in the Rockefeller Parkway

The John D. Rockefeller, Jr., Memorial Parkway unites Grand Teton and Yellowstone National Parks. This 24,000 acre unit is administered by Grand Teton, but hunting regulations are in accord with Wyoming State law. Elk hunting occurs throughout the Rockefeller Parkway. The Rockefeller Parkway is also open for legal hunting of several other game species from September 1 through December 31.



### Road closures

- The RKO Road, the River Road and the Bar BC Road (unpaved roads from Signal Mountain South to Cottonwood Creek) are closed to motorized vehicles in early October.
- The unpaved portion of the Moose-Wilson Road is closed to motorized vehicles for the winter on November 1.
- The Teton Park Road is closed to motorized vehicles for the winter from the Taggart Lake parking area north to Signal Mountain on November 1.

### Poaching

Abundant wildlife in national parks attracts poachers. If you witness any activity you believe to be illegal, do not attempt to take action yourself. This is a job for a ranger. Note the location, description of the people involved, license numbers and descriptions of any vehicles and report the incident as soon as possible. Call 911 or park dispatch at 739-3300. Call 1-800-442-4331 to report poaching outside the park.

### Current Information

Call 739-3614 for recorded information on the park's Elk Management Program.

### Visitor Safety

Hunting is prohibited within 1/4 mile of state highways 26 and 89 and within 1/2 mile of buildings. Some parts of Area 75/76 have a 1/4-mile closure. Closed parts of Area 75/76 are posted. Shooting is permitted adjacent to secondary roads within areas open to hunting. While visitors may hike in parts of Grand Teton National Park and the Rockefeller Parkway that are open to legal hunting, it is not recommended. Most of the park's hiking trails are located in areas not open to hunting. Consult the map or check at the Moose Visitor Center for recommended hiking trails.

### Safe Driving

Watch for large animals on the road. Drive slowly at night. Elk, bison and mule deer frequently migrate at night and may be difficult to see. Moose use roads as travel corridors. Hitting a large animal at highway speeds has resulted in fatal accidents. Careful driving protects you and wildlife.