

# NATIONAL PUBLIC LANDS GRAZING CAMPAIGN

## Livestock Grazing Impacts on Hunting

Domestic livestock grazing reduces wildlife populations by competing for food, water, and space, and degrading habitat. Habitat degradation caused by grazing also exposes prey species to increased predation (due to lost vegetative cover for concealment and escape), resulting in further declines in those populations. The vast majority of forage and water resources in the West are devoted to domestic livestock grazing, depriving hunters and fishers of what could be incredible sporting opportunities. Ironically, despite the preference it receives, livestock grazing provides less economic benefit to local, regional and national economies than does the presence of wildlife. Economic studies comparing grazing to hunting/fishing/watching/photographing elk, deer, trout, waterfowl, wolves and songbirds demonstrate that native wildlife has a higher economic value than producing livestock from the same natural resources (Duffield, et al. 1994, Campbell 1970, Loomis, et al. 1989, Duffield 1989).

Range resources in the arid West are finite and the past and present practice of allocating the majority of forage, water, and space to cattle and sheep on public lands has seriously affected the carrying capacity for native species (Wuerthner 1992). Every blade of grass consumed by domestic livestock is unavailable to wild herbivores. For example, a study of antelope and domestic livestock in New Mexico showed that pronghorn diets over-lapped 39 percent with domestic sheep and 16 percent with cattle (Howard, et al. 1990). Another study reported forage competition between deer, elk and livestock in Montana's Missouri Breaks (Mackie 1970). Similar findings of dietary overlap of deer and elk with domestic livestock were reported in Oregon (Miller and Vavra 1982) and Alberta (Teller 1994).

The mere presence of domestic livestock also causes a shift in habitat use by native species, often relegating native ungulates to less suitable habitats with a resulting decline in vigor and survival. For example, mule deer have been discovered to shift their habitat use in response to livestock grazing (Lott, et al. 1991). Elk in Montana have also moved away from pastures that were actively grazed by cattle (Frisina 1992), and elk and mule deer in Arizona have declined after cattle were introduced to pastures (Wallace and Krausman 1987). Both deer and elk vacated preferred habitats after livestock were introduced into areas in Alberta (Teller 1994).

Disease transmission from domestic livestock to wildlife is yet another problem. Many bighorn sheep herds in the West are decimated by disease transmitted from domestic livestock (Goodson 1982, Berger 1990, Krausman, et al. 1996). Indeed, the presence of domestic sheep in bighorn range is often the only factor that precludes the restoration of wild sheep to many former and otherwise suitable habitats throughout the West.

Many gamebirds are also negatively affected by livestock grazing. Sage grouse populations are declining throughout the West due to a host of problems created by livestock production (Connelly, et. al. 2000). The loss of hiding cover in heavily grazed rangelands exposes nesting grouse and other species like quail and sandhill crane to higher predation rates (Gregg et. al 1994, Brown 1982, Littlefield and Paullin 1990). Grazing on wet meadows used by sage grouse chicks reduces food availability and increases losses to predators. Fences used to contain livestock become perching sites for avian raptors that prey on grouse. Haying operations negatively impact many ground nesting bird species (Kirsh, et al. 1978). Waterfowl production also suffers as a result of grazing and haying operations that reduce hiding cover, resulting in higher nest failures (Greenwood, et. al. 1988, Gilbert, et al. 1992).

Hunters, fishers, and other lovers of wildlife have good reason to support the removal of domestic livestock from public lands. As livestock numbers are reduced, hunting, fishing, and wildlife watching opportunities will increase, as well as the quality of the experience.

- Berger, J. 1990. Persistence of different-sized populations: an empirical assessment of rapid extinctions in bighorn sheep. *Conservation Biology* 4: 91-98.
- Brown, R. L. 1982. Effects of livestock grazing on Means Quail in southeastern Arizona. *J. Range Management* 35(6): 727-732.
- Campbell, H. J. 1970. Economic and social significant of upstream aquatic resources on the West Coast *in* Symp. Forest Land Uses and Stream Environments. Oregon State University. Corvallis, OR.
- Connelly, J. W., M. A. Shroeder, A. R. Sands, C. E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats. *Wildlife Society Bull.* 28(4): 967-985.
- Duffield, J. 1989. Nelson property acquisition: social and economic impact assessment. Report to Montana Department of Fish, Wildlife and Parks.
- Duffield, J. W., T. C. Brown, S. D. Allen. 1994. Economic value of instream flow in Montana's Big Hole and Bitterroot Rivers. Res. Paper RM-137. USDA-Forest Service, Rocky Mountain Forest and Range Exp. Stn. Fort Collins, CO.
- Frisima, M. R. 1992. Elk habitat use within a rest-rotation grazing system. *Rangelands* 14: 93-96.
- Gilbert, D. W., D. R. Anderson, J. K. Ringelman, M. R. Szymczak. 1992. Response of nesting ducks to habitat and management on the Monte Vista National Wildlife Refuge, Colorado. *Wildlife Monographs* 131: 1-44.
- Goodson, N. J. 1982. Effects of domestic sheep grazing on bighorn sheep: a review. *Biennial Symp. North American Wild Sheep and Goat Council* 3: 287-313.
- Greenwood, R. J., A. B. Sargeant, D. H. Johnson, L. M. Cowardin, T. L. Shaffer. Mallard nest success and recruitment in prairie Canada. *North American Wildlife and Natural Resources Conf.* 52: 298-309.
- Gregg, M. A., J. A. Crawford, M. S. Drut, A. K. Delong. 1994. Vegetational cover and predation of sage grouse nests in Oregon. *J. Wildlife Management* 58(1).
- Howard, V. W., J. L. Holechek, R. D. Pieper, K. Green-Hammond, M. Cardenas, S. L. Beasom. 1990. Habitat requirements for pronghorn on rangelands impacted by livestock and net wire in east-central New Mexico. *Agric. Ext. Bulletin* 750. New Mexico State University. Las Cruces, NM.
- Kirsh, L. M., H. F. Duebber, A. D. Kruse. 1978. Grazing and haying effects on habitats of upland nesting birds. *North American Wildlife and Natural Resources Conf.* 43: 486-497.
- Krausman, P. R., R. Valdez, J. A. Bissonette. 1996. Bighorn sheep and livestock *in* RANGELAND WILDLIFE. Society for Range Management. Denver, CO.
- Littlefield, C. D. and D. G. Paullin. 1990. Effects of land management on nesting success of sandhill cranes in Oregon. *Wildlife Society Bull.* 18: 63-65.
- Loomis, J., D. Donnelly, C. Sorg-Swanson. 1989. Comparing the economic value of forage on public lands for wildlife and livestock. *J. Range Management* 42(2): 134-138.
- Lott, R. E., J. W. Menke, J. G. Kie. 1991. Habitat shifts by mule deer: the influence of cattle grazing. *J. Wildlife Management* 55:16-26.
- Mackie, R. J. 1970. Range ecology and relations of mule deer, elk, and cattle in the Missouri Breaks, Montana. *Wildlife Monographs* 20. 79 pages.
- McIntosh, B. J. and P. R. Krausman. 1982. Elk and mule deer distribution after a cattle introduction in northern Arizona. Pages 545-552 *in* J. M. Peek and P. D. Dalke (eds.). Symp. Wildlife-Livestock Relationships. Forest, Wildlife and Range Exp. Station Bull. Univ. Idaho. Moscow, ID.
- Miller, R. F. and M. Vavra. 1982. Deer, elk, and cattle on northeastern Oregon rangelands *in* J. M. Peek and P. D. Dalke (eds.). Symp. Wildlife-Livestock Relationships. Forest, Wildlife and Range Exp. Station Bull. Univ. Idaho. Moscow, ID.
- Teller, E. 1994. Cattle and cervid interactions in Alberta. *Canadian Field Naturalist* 108(2): 186-194.
- Wallace, M. C. and P. R. Krausman. 1987. Elk, mule deer, and cattle habitats in central Arizona. *J. Range Management* 40: 80-83.
- Wuerthner, G. 1992. Wall Creek Game Range-A dissenting view. *Rangelands* 14(1): 8-11.
- Yeo, J. F., J. M. Peek, W. T. Wittinger, C. T. Kvale. 1993. Influence of rest-rotation cattle grazing on mule deer and elk habitat use in east-central Idaho. *J. Range Management* 46: 245-250.