

# Beck And Mitchell 2000 Details



Beck, J.L. and D.L. Mitchell. 2000. Influence of livestock grazing on sage grouse habitat. *Wildlife Society Bulletin* 28(4):993-1002. This paper is cited by many to point out the detrimental effects of livestock and livestock grazing to sage-grouse.

## Direct Positive

1. Light or moderate cattle grazing in dense, grassy meadows induced sage grouse use.
2. Cattle grazing stimulated growth of grouse food forbs in upland meadows
3. Light cattle grazing made food forbs more available.
4. Rest-rotation cattle grazing promoted recovery of forbs for grouse in rested units.

## Direct Negative

1. Sheep bed grounds on ridges destroyed sagebrush used by sage grouse in heavy snows.\* **(this was probably true in 1938)**
2. Overgrazing leads to deteriorated wet meadow hydrology; reduces grouse habitat.
3. Sheep and cattle trampling destroyed eggs.\*
4. Sheep and cattle caused nest desertions.\*
5. Heavily grazed meadows in poor condition avoided by sage grouse.
6. Densities of nest-depredating ground squirrels likely increased following heavy grazing.#

\*Beck and Mitchell cite a 1938 paper on grazing to find 3 of 6 direct negatives? The paper cited in Beck and Mitchell (2000) was: Rasmussen, D.I. and I.A. Griner. 1938. Life histories and management studies of the sage grouse in Utah, with special reference to nesting and feeding habits. *Transactions of the North American Wildlife Conference* 3:852-864

#This is an expert opinion and it may be true but Coates (2007) found that: "*Wyoming ground squirrels and Piute ground squirrels encountered intact sage-grouse eggs in active nests during female incubation recesses and sometimes attempted to open eggs but were always unsuccessful as were all rodent encounters with intact eggs.*"

## Indirect Positive

1. Sage grouse created new leks on domestic sheep salting grounds.
2. Reducing dense sagebrush cover should improve herbaceous plants used by sage grouse in summer.

## Indirect Negative

1. Reduction in habitat through conversion of sagebrush to grass for livestock. **Man-caused – not grazing**
2. Livestock grazing can promote introductions of alien weeds. **It can, but so can other factors**
3. Winter sagebrush cover lost through sagebrush conversion to grassland. **Man-caused – not grazing**
4. Sprayed sagebrush strips contained lower amounts of forbs for sage grouse. **Man-caused – not grazing**
5. Sage grouse quit nesting in areas treated with herbicides to increase grass forage. **Man-caused – not grazing**