

## SUMMARY

### SAGE GROUSE PRODUCTION AND MORTALITY STUDIES

Nevada Department of Wildlife, Project W-48-R-21

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It was determined that there had been a continual decline in Sage Grouse numbers across Nevada for the past 30 years. In Washoe County, the numbers of grouse hunters declined 66%, from 2295 hunters in 1970, to 760 hunters in 1982. While during the same period the number of birds harvested declined from 5805 birds in 1970 to 1120 birds in 1982, a decline of 81%.

(Shiver and Retterer, 1988) found summer production estimates in Washoe County very low with an average of 1.1 chicks/100 hens compared to 3 chicks/100 hens or more in other parts of the State.

In the Spring of 1988, 1,400 large brown chicken eggs, 7 eggs per nest, were placed in 200 simulated sage grouse nest in two study areas in northern Washoe County and at one location on the Saval Ranch in Elko County. The latter area was considered to have greater canopy cover and also enjoyed greater sage grouse production.

At the two study areas in Washoe County, 100% of the eggs were destroyed in the first 2 weeks; 84% of the nest were destroyed in the first 3 days. At the Saval Ranch in Elko County, just 3% of the nests were destroyed in 10 days. Ravens were believed to be the chief nest predator.

Reference was made to research done in Idaho in 1981 by R.E. Autenrieth, where it was determined that nest predation was the greatest constraint on Sage Grouse populations. After a raven control program was initiated it was found that 51% of all nest survived predation in the raven control area as compared to only 6% nest survival in the uncontrolled areas. It was noted that magpies, badgers, and even ground squirrels preyed on eggs. Of 200 nests with 7 eggs each, 1,064 eggs were removed by predators in a 2 week period in the Autenrieth study. Ravens were determined to be the greatest predator, with dummy nest losses of 39% occurring in "good sage grouse habitat".

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In a separate study done in 1942, game researcher, Warren Allred found in Wyoming that 80% of all sage grouse nest were being destroyed by predators - of which 23% were attributed to ravens and 14% to coyotes. It was determined that even in areas completely protected from hunting, sage grouse were steadily declining.

Allred, Warren J., "Predation and the Sage Grouse," Wyoming Wildlife, Vol. 7 (1942), pp. 3-4.