

**Seasonal Habitat Use, Movements and Vital Rates  
in the Parachute/Piceance/Roan Population  
of Greater Sage-Grouse**

**Progress Report  
April – June 2008**



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## **BACKGROUND**

The Colorado Division of Wildlife (CDOW) is continuing a study of the Parachute/Piceance/Roan (PPR) population of greater sage-grouse (*Centrocercus urophasianus*) during 2008. The PPR is one of several small, naturally and spatially fragmented populations of sage-grouse in Colorado. This project is the result of a partnership among CDOW, industry, other land owners, and managers in the PPR area to sustain the PPR greater sage-grouse population. This information will be useful in assessing the current population status and expected future trend of PPR sage-grouse, and for identifying alternative management strategies for this population.

## **STUDY AREA**

The area occupied by the PPR population of sage-grouse is located in Rio Blanco and Garfield counties (Fig. 1)

## **RESULTS**

### **Spring Trapping and Monitoring of Sage-Grouse**

Spring trapping was carried out intermittently as conditions and manpower permitted between 6 April 2008 and 22 May 2008. A total of 7 female sage-grouse were captured and radio-collared over 14 trap nights. Birds were trapped in proximity of 5 active leks including: Bar-D, Bragg Springs, Canyon Creek, Stewart Gulch, and Yankee Gulch. Twenty-eight birds remained alive from previous field seasons.

From 1 April 2008 through 30 June 2008, 175 use locations were recorded on 35 radio-marked birds from the ground or aerially. Eight mortalities have been documented during this quarter (Fig. 2). There are currently 27 female sage-grouse actively being monitored within the PPR.

### **Sage-Grouse Nesting Chronology and Biology**

The earliest nest (classified as an incubating female) was confirmed 16 May 2008. The last nest was confirmed 16 June 2008. The earliest documented hatch (at least 1 egg successfully hatched) was 16 June 2008. The last documented hatch during this quarter was 25 June 2008 (Fig. 3). One hen is currently on a nest and is predicted to hatch 7 July 2008. A total of 19 nests (18 first nests and 1 re-nest) were located and monitored in 2008

(Fig. 4). Fifteen of 35 birds which were actively being monitored during breeding season were not observed nesting, although it was difficult to document nesting attempts on all females due to problematic field conditions and logistics. Two remaining birds were not observed during breeding season and have been missing since early spring. Due to access issues caused by late winter conditions and shortages in manpower, apparent nest and female success results are problematic and should be viewed cautiously (Table 1).

## **Future Research**

### ***Staff Tenure***

Brandon Miller, who has worked on the PPR project since March 2007, will continue to work on the project through August 2008. Benjamin Stultz was hired on for the summer and will also work through the end of August 2008.

### ***Plans for the 3<sup>rd</sup> quarter***

All radio-marked grouse will continue to be monitored as often as logistically possible (i.e. weather, road conditions and access issues). All radio-marked birds will be monitored on a weekly basis. Additional trapping efforts for females are planned for late in the 3<sup>rd</sup> quarter and early in the 4<sup>th</sup> quarter, but are contingent upon hunting seasons and access.

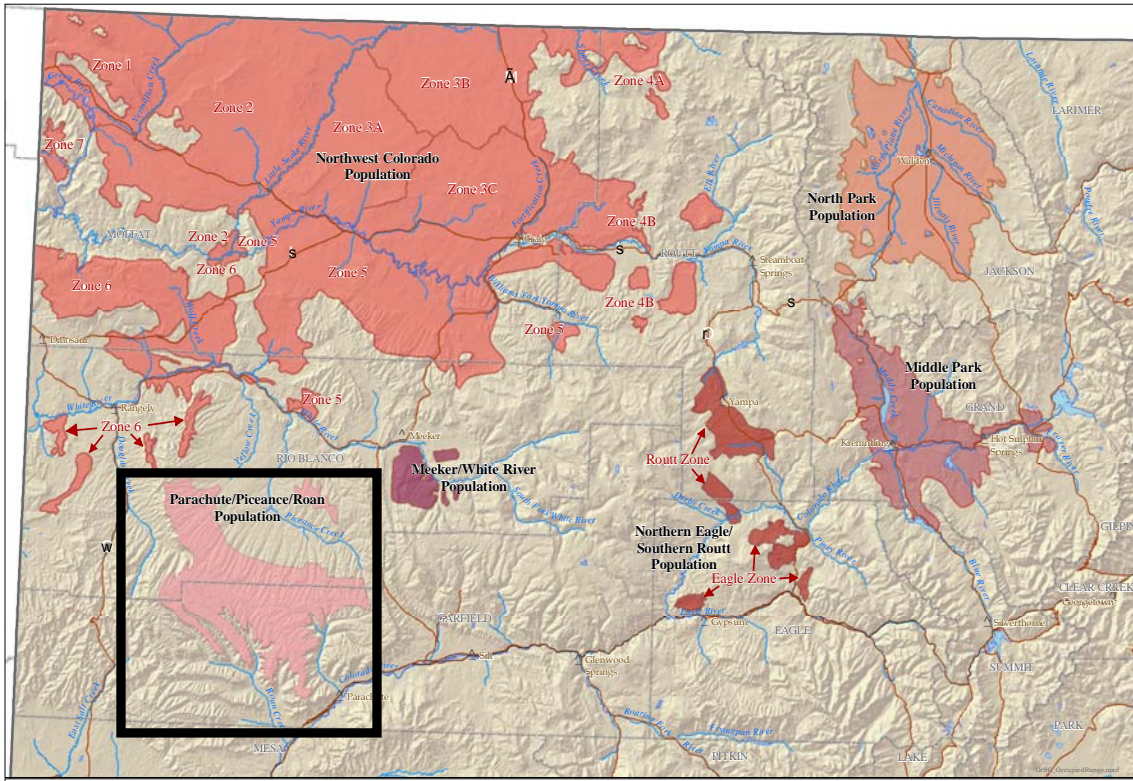


Figure 1. Location of the PPR study area in relation to the overall statewide range of greater sage-grouse in northwestern Colorado.

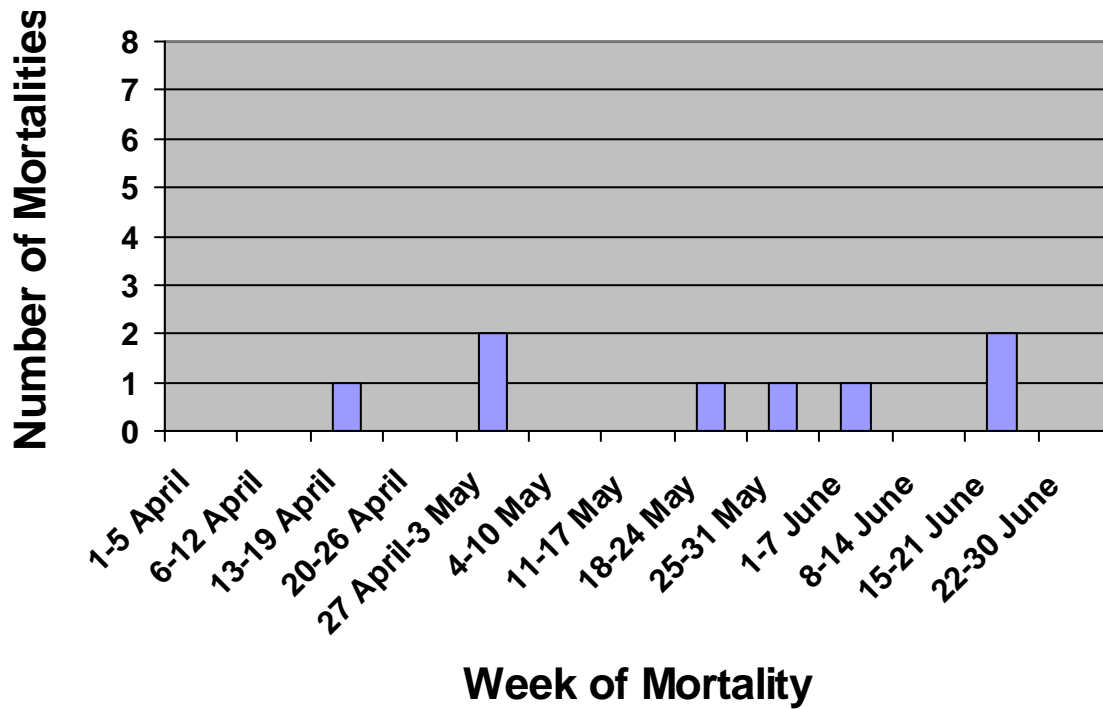


Figure 2. The week documented and the number of mortalities (n=8) of female greater sage-grouse in the Parachute/Piceance/Roan, Colorado, 2008.

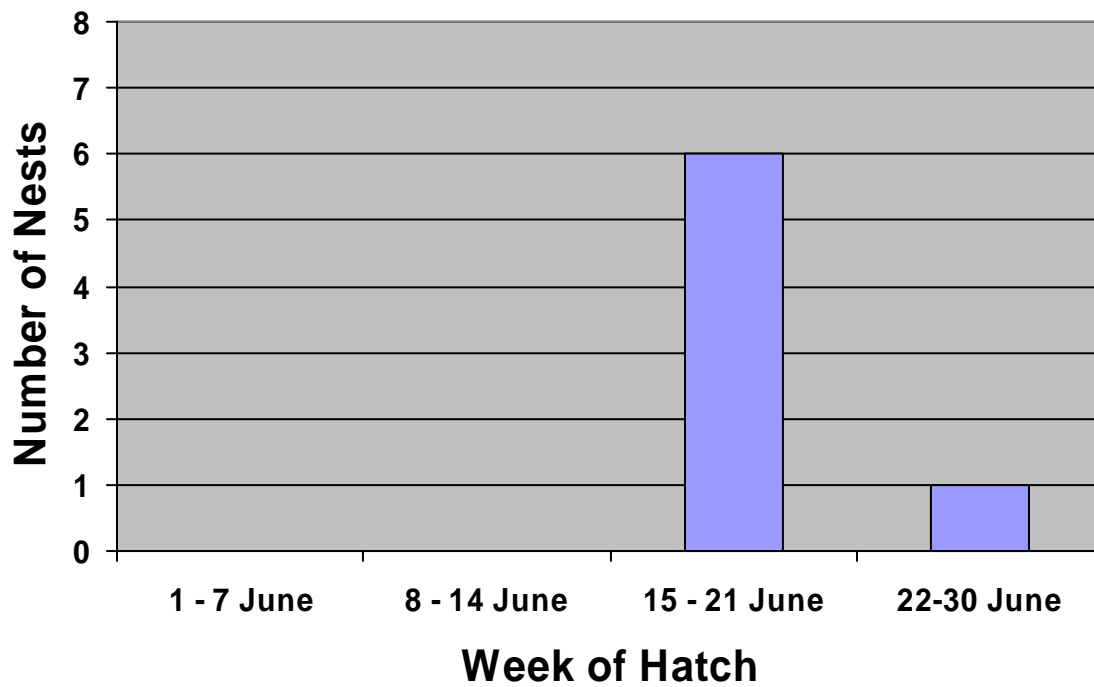


Figure 3. The week of successful nest hatch (n=7) of female greater sage-grouse in the Parachute/Piceance/Roan, Colorado, 2008.

Table 1. Age, number and success of female greater sage-grouse in the Parachute/Piceance/Roan, Colorado, 2008.

Parachute/Piceance/Roan	Unsuccessful	Successful	Success Rate
Adults	8	1	11.1%
Yearlings	16	6	37.5%
<b>Totals</b>	25	7	
<b>Overall Hen Success</b>			28.0%

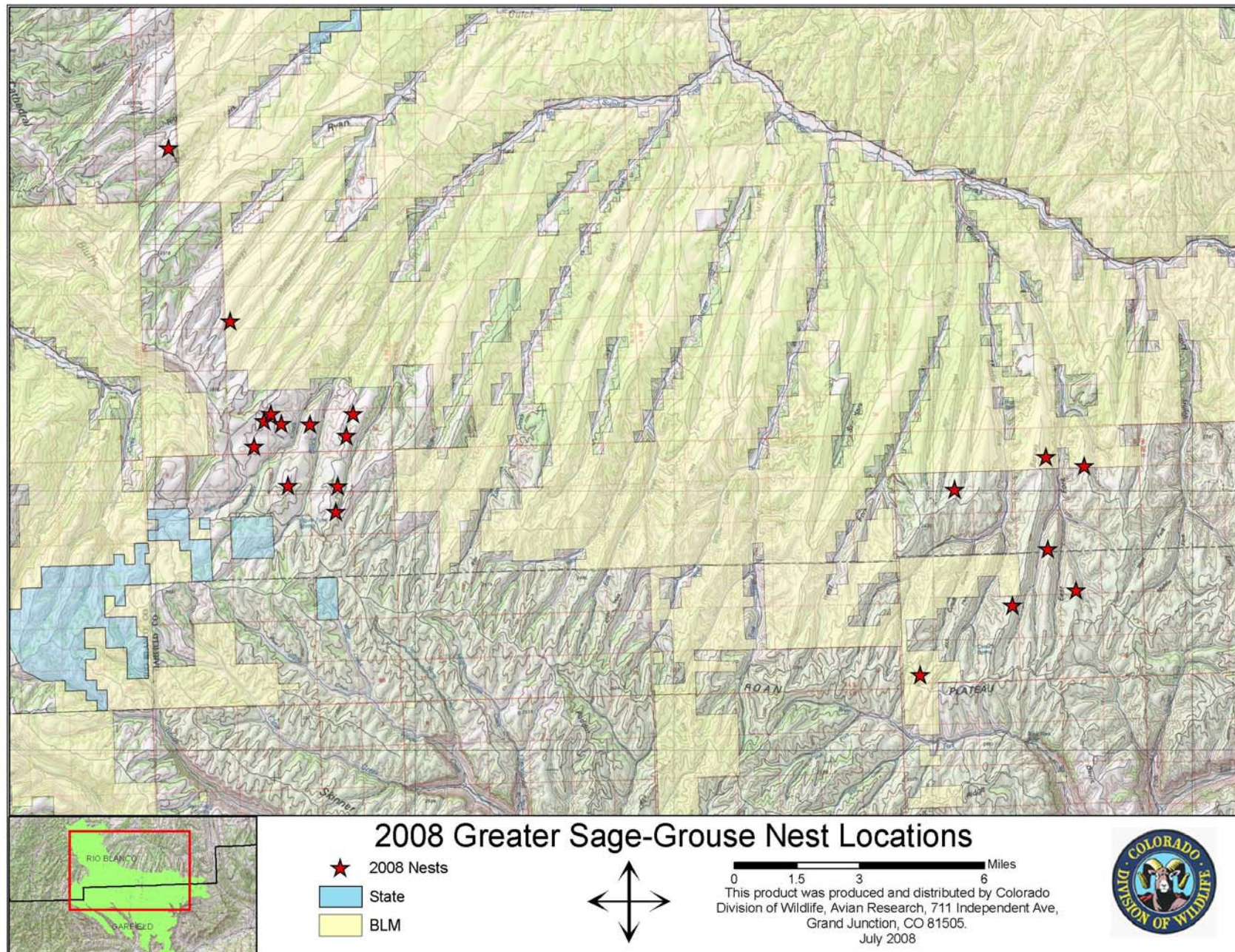


Figure 4. Female greater sage-grouse nest locations (n = 19) in the Parachute/Piceance/Roan, Colorado, 2008.