

**To:** Pheasants Forever and the California Department of Fish and Wildlife

**From:** U.S. Geological Survey, WERC Research Team

**Subject:** June 2015 Pheasant Project Update

### June 2015 Summary Bullets

- Monitored 32 pheasants (29 VHF, 3 GPS)
- Obtained 187 ground telemetry locations
- Obtained 605 GPS telemetry locations
- Located 40 nests (19 successful, 12 failed, 9 active)
- Monitored 19 broods (4 successful, 4 failed, 11 active)
- Conducted 134 predator surveys (raven/raptor)
- Conducted 84 nest habitat surveys
- Conducted 50 brood habitat surveys
- Recovered 2 mortalities

This document is an update specifically related to monitoring and research objectives for the Central Valley ring-necked pheasant research project during the 2015 season as of 30 June. This document does not represent a completed data analysis and findings. Instead, the purpose of this update is to provide you with a summary of our efforts, as well as observations regarding movements, reproduction, habitat, and predators from the field perspective. This information is preliminary and is subject to revision. It is being provided to meet the need for timely best science. The information is provided on the condition that neither the U.S. Geological Survey nor the U.S. Government may be held liable for any damages resulting from the authorized or unauthorized use of the information.

## Telemetry Monitoring

During June 2015, we obtained 187 ground telemetry locations on 29 active VHF units (Gray Lodge WA,  $n = 11$ ; Roosevelt Ranch,  $n = 11$ ; Yolo Bypass WA,  $n = 7$ ) and one GPS unit equipped with a VHF transmitter. Since January 2015, we have collected 663 telemetry locations across all three field sites. One female at Gray Lodge WA was not tracked in June because either the VHF unit ceased functioning or she moved out of the study area. We also collected 605 GPS telemetry locations from the three remaining pheasants outfitted with GPS transmitters at Roosevelt Ranch ( $n = 2$ ) and Yolo Bypass WA ( $n = 1$ ).

## Reproduction

We have monitored a total of 40 nests (19 successful, 12 failed, 9 active) across the three sites as of 30 June. Fifteen nests have been located at Gray Lodge WA (5 successful, 5 failed, 5 active), 14 nests have been located at Roosevelt Ranch (9 successful, 3 failed, 2 active), and 11 nests have been located at Yolo Bypass WA (6 successful, 3 failed, 2 active) since mid-April. Six of the currently active nests are re-nest attempts by females with previously failed nests. The remaining three active nests are re-nest attempts by females that had successful nests but their broods failed shortly after hatching. Of the 12 failed nests, nine were depredated and three were abandoned. Four nests appeared to be depredated by a mammalian predator, three nests appeared to be depredated by an avian predator, and two were depredated by an unknown predator.



Depredated nest at Gray Lodge WA

## Brood Monitoring

For each successful nest, we obtain a series of weekly locations of the female with her chicks. Broods are considered successful if at least one chick is present 50 days post-hatch. In total, four broods failed before reaching the 50 day post-hatch threshold and four broods have been classified as successful. During June, we monitored six broods at Yolo Bypass WA (2 successful, 1 failed, 3 active), nine broods at Roosevelt Ranch (2 successful, 3 failed, 4 active), and five broods at Gray Lodge WA (1 failed, 4 active). One female at Yolo Bypass WA was observed with 19 chicks at 50 days post-hatch, but her initial brood size was eight chicks, which suggests that brood mixing may have occurred or that another brood was close to her location at that time. The other three broods were observed with a maximum of three chicks at the 50 day post-hatch threshold.

## **Microhabitat and Avian Predator Surveys**

We conduct microhabitat surveys and 10 minute point count surveys for ravens and raptors at all nest locations and at the first three brood locations. We also conduct raven/raptor and microhabitat surveys at dependent and independent random locations to characterize available habitat within the study area. During point count surveys we document the presence of livestock, horses, and anthropogenic subsidies such as roads, buildings, fences and farms. As of 30 June, we have conducted 134 raven/raptor surveys, 84 microhabitat surveys associated with nest locations, and 50 microhabitat surveys associated with brood locations.

## **Mortalities**

We have recovered two mortalities across all field sites during June, and both were recovered at Roosevelt Ranch. One female's collar and a few body feathers were located next to a recently harvested alfalfa field, but no body parts were found. The collar was located on a dirt road between the alfalfa field and a large haystack, so evidence of the carcass may have been destroyed by farming equipment or scavenged by a mammalian predator. The other female was recovered as a mostly intact carcass with no evidence of predation, which suggests that her cause of death may have been stress related. Since January 2015, we have recovered six mortalities at Gray Lodge WA, 11 at Roosevelt Ranch, and six at Yolo Bypass WA.



**Female found as intact carcass at Roosevelt Ranch**

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Preliminary