Evaluating the Raven RQ-11A small Unmanned Aircraft System for Monitoring Breeding Greater Sage-Grouse in Grand County, Colorado

This proof of concept study assessed the ability of the RQ-11A Raven small Unmanned Aircraft System (sUAS) to detect greater sage-grouse utilizing leks (breeding areas) and investigate the following questions:

1. How will greater sage-grouse respond to sUAS flights?
2. Which sUAS camera (visible wavelength or thermal infrared) best detects greater sage-grouse?
3. Do the sUAS cameras detect greater sage-grouse at flight altitudes that do not disturb the birds?
4. Can the sUAS cameras detect greater sage-grouse obscured by sagebrush?
5. Can the sUAS cameras distinguish greater sage-grouse males from females?

The Department of the Interior – U.S. Geological Survey
Raven RQ-11A Unmanned Aircraft System

The electric 4.2 lb. Raven RQ-11A is hand launched with a natural color or thermal infrared camera payload

Blind with biologist observing grouse behavior

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