

An Inventory of Peregrine Falcons and Burrowing Owls on Lands Managed by the Uncompahgre Field Office of the Bureau of Land Management in Western Colorado



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In Cooperation With:



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2009 Peregrine Falcon nest site in the Paradox Valley by Kathy Brodhead.

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Executive Summary

Rocky Mountain Bird Observatory conducted an inventory for Peregrine Falcons (*Falco peregrinus*) and Western Burrowing Owls (*Speotyto cunicularia hypugea*) in the spring and summer of 2009. Peregrine surveys took place during the months of April and May of 2009. Opportunistic Burrowing Owl surveys took place throughout the spring and summer of 2009. We conducted surveys at four historical Peregrine Falcon breeding sites and surveyed other locations with appropriate habitat on lands managed by the Uncompahgre Field Office of the Bureau of Land Management. We surveyed for Burrowing Owls in prairie dog towns on an opportunistic basis because the Peregrine Falcon inventory was a priority for the Bureau of Land Management. We compiled Burrowing Owl data from these surveys along with data from incidental reports by birders and biologists in the area.

We located two active Peregrine Falcon nest sites in the study area. We observed Burrowing owls at five locations during the 2009 breeding season within the Uncompahgre Field Office boundaries and three of these were on lands managed by the Bureau of Land Management.

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Introduction

In 1998 the Rocky Mountain Bird Observatory initiated the Monitoring Colorado's Birds program. The goal of this program is to monitor the populations of all birds that breed in Colorado. Many of the species that breed in Colorado can be monitored via point-count surveys; however, for species that are more difficult to monitor the Special Species program was created. The Special Species program has done an excellent job of tracking several of Colorado low-density species including a few species of raptors (i.e., Osprey), but information for Peregrine Falcons and Burrowing Owls is not easily obtained and requires a focused survey effort.

The Peregrine Falcon was virtually eliminated from western Colorado as a breeder in the 1950s and 1960s as a result of the widespread use of DDT (Righter et al. 2004). This species received protection under the Endangered Species Act of 1973, and thanks to effective recovery efforts, was delisted in 1999. However, like all migratory birds in the United States, Peregrines continue to be protected via the Migratory Bird Treaty Act of 1918. Peregrine Falcons are also listed as a Species of Greatest Conservation Need in the Colorado Wildlife Action Plan.

The majority of Peregrine Falcons that breed in Colorado are in the western portion of the state because of the abundance of nesting habitat there (Righter et al. 2004). Historical breeding sites exist on lands managed by the Uncompahgre Field Office (UFO) of the Bureau of Land Management (BLM); however, actual nesting locations vary from year to year. Finding and protecting Peregrine nest sites will help the species survive in this area and ensure that the BLM complies with existing laws protecting the species.

The Western Burrowing Owl breeds in desert grassland, shrub-steppe, and agricultural areas in western North America. In western Colorado, a scattered population of the Burrowing Owl occurs in these habitat types, typically in association with white-tailed prairie dog (*Cynomys leucurus*) colonies. Burrowing Owls are undergoing mild to relatively severe local and regional population declines throughout much of western North America and have disappeared from the far eastern and northern portions of their historical range in North America (Haug et al. 1993). In Canada they are listed as endangered, and in Mexico they are considered threatened. In the United States they have special status designation in nearly all states in which they occur, and are listed by the US Fish and Wildlife Service (USFWS) as a migratory species of concern for the Southern Rockies/Colorado Plateau region. The state of Colorado lists Burrowing Owls as threatened. Prior to 2009, existing data on Burrowing Owls within UFO boundaries were limited to a few incidental observations, with little to no data on breeding status. Understanding use or non-use of local habitats by Burrowing Owls will enhance resource planning efforts, impact National Environmental Policy Act documents analyses, and help assure avoidance both of important breeding areas and sites that could potentially serve as off-site mitigation.

Methods

Site Selection

Prior to the field season, RMBO acquired maps from the BLM showing historical nest sites and Peregrine Falcon areas of concern on UFO lands. The BLM requested that we concentrate survey efforts in Paradox Valley (Figure 1) and Escalante Canyon (Figure 2) because of historical Peregrine Falcon breeding sites and concerns about potential impacts from recreationists (primarily rock climbers).

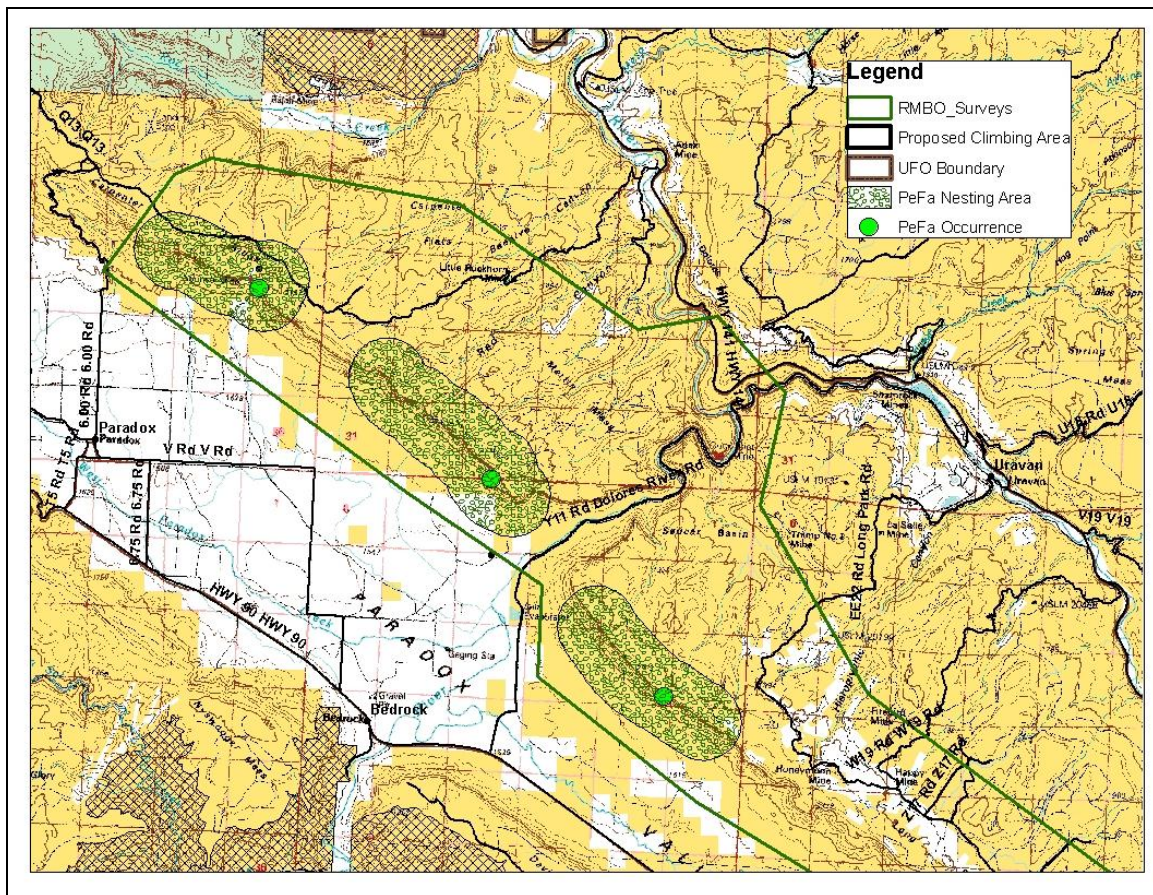


Figure 1. Paradox Valley priority Peregrine Falcon survey locations.

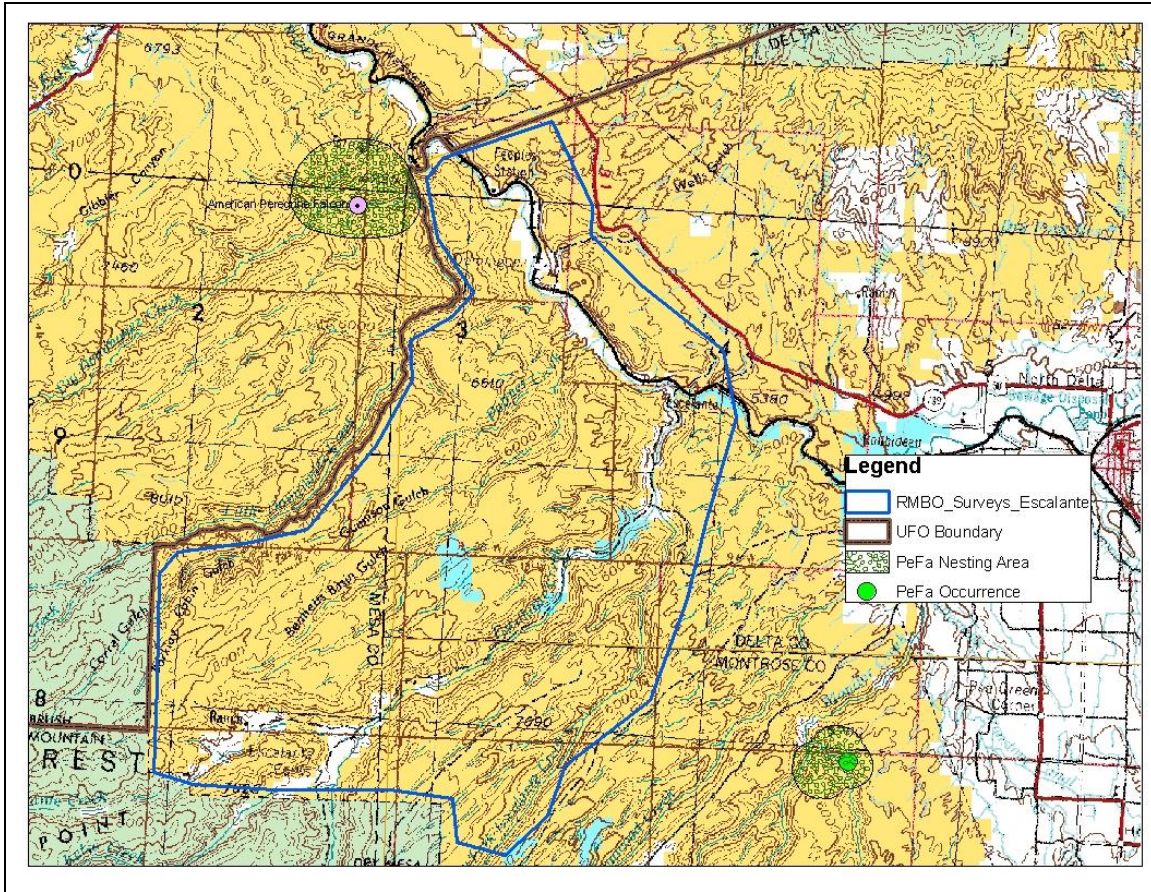


Figure 2. Escalante Canyon priority Peregrine Falcon survey locations.

For Burrowing Owls, we did not choose survey sites, but instead instructed field technicians to scan prairie dog towns if time allowed as they traveled between Peregrine Falcon survey sites.

Protocol

We hired five field technicians to conduct one week of surveys apiece. Technicians took part in a one-day training session held in the study area where they practiced survey techniques. The observers were all biologists with prior experience conducting bird surveys.

At the training session, field workers were assigned areas to survey and equipment. A bulletin explaining the most effective ways to search for falcon nest sites was used to assist with explanation of survey techniques (Linthicum, unknown date). To conduct Peregrine Falcon surveys, field workers spent mornings at historical nest sites and watched for activity. In the afternoons, field technicians searched other areas with appropriate habitat. When field workers successfully located a nest site, they

concentrated their efforts in other areas with appropriate habitat. Since funds for this project were limited and not available until just before surveys began, most of the field work took place in late-April. This is a good, but not optimal, time to survey for Peregrine Falcons.

For Burrowing Owls, field technicians surveyed prairie dog towns as they traveled between Peregrine Falcon survey sites. We also alerted local birders and biologists of our interest in Burrowing Owl sightings within UFO boundaries during the breeding months (April through July). We searched for messages posted to a birding list-serve (the West Slope Bird Network) for reports of Burrowing Owls in the area.

Results

Two active Peregrine Falcon nest sites were discovered as a result of our search efforts (Figures 3 and 4). The 2009 Paradox Valley nest site was in an area with historical Peregrine Falcon nesting activity and the Escalante Canyon nest site was a new location. We learned of one additional confirmed breeding site just outside of the UFO boundary later in the season from a local birder (Figure 3). We are not listing Universal Transverse Mercator (UTM) coordinates for Peregrine Falcon nest sites or observations due to the sensitive nature of this information.

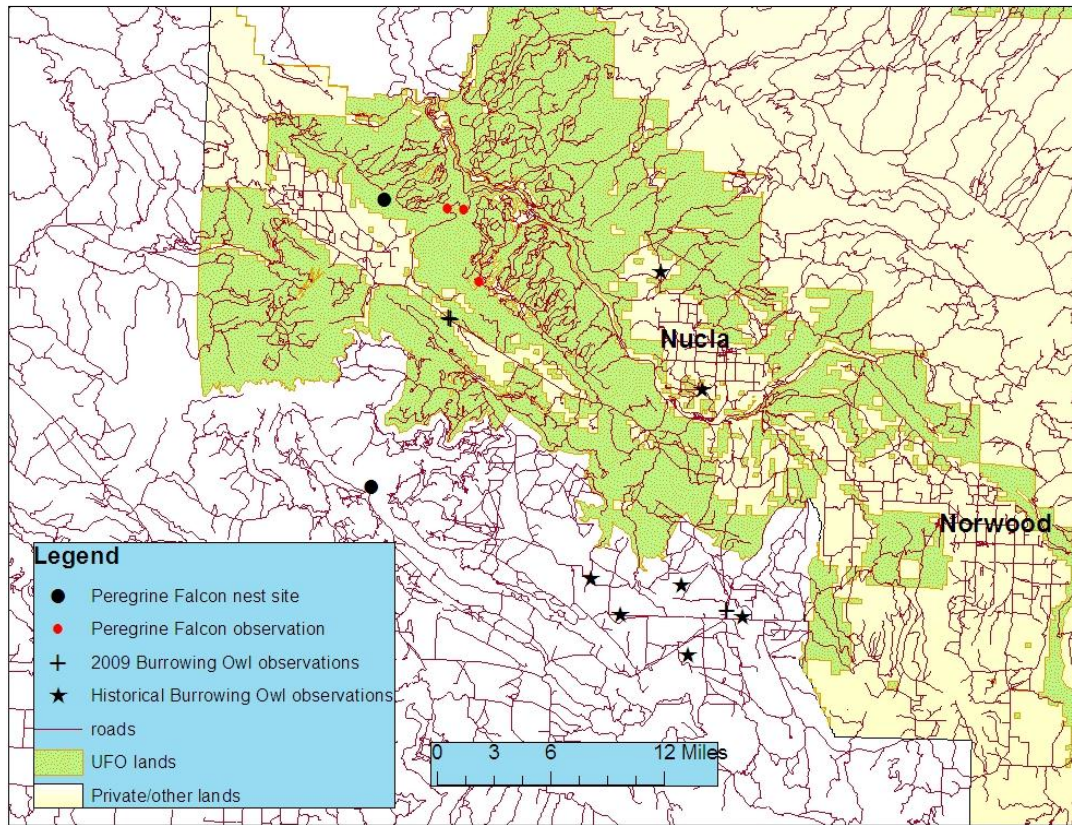


Figure 3. Locations of Peregrine Falcon breeding sites and observations in 2009 and locations of Burrowing Owl observations since 2001 in the Paradox Valley area.

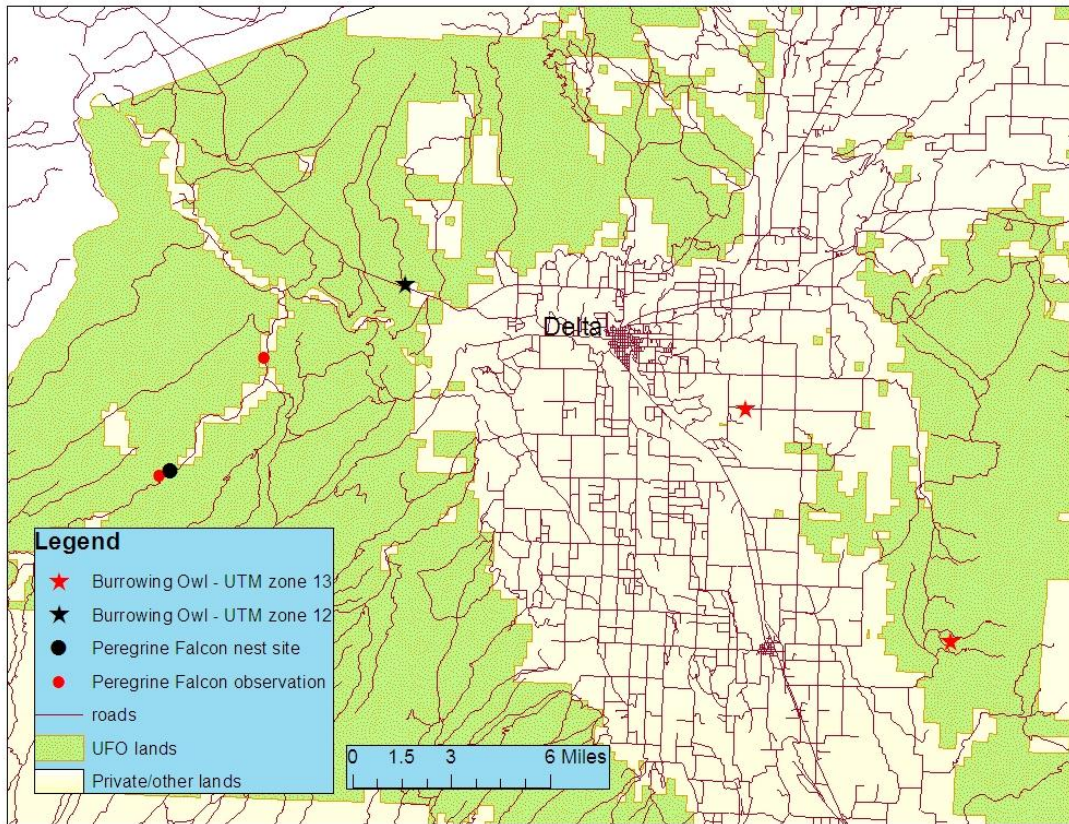


Figure 4. Locations of 2009 Peregrine Falcon breeding site and observations and Burrowing Owl observations since 2008 in the Escalante Canyon and City of Delta areas.

We found Burrowing Owls in three locations on UFO lands during the 2009 breeding season and we suspect, but did not confirm, breeding at these sites (Table 1; Figures 3 and 4). We did confirm this species breeding at another location within the UFO boundary, but on private land, in 2008 and 2009 (Figure 4). Historical Burrowing Owl records also exist in the RMBO Special Species database for UFO lands and nearby areas. In total, there are seven locations where owls have been reported within UFO boundaries since 2001 and four of these are on lands managed by the BLM (Figures 3 and 4). We are also reporting six locations where Burrowing Owls have been observed near lands managed by the UFO (Figure 3). These observations should be of interest because of their proximity to the UFO boundary and for Geographic Information System habitat modeling purposes.

Table 1. Burrowing Owl breeding site and observation location coordinates (NAD 83 projection) on or near lands managed by the Uncompahgre Field Office.

Zone	Easting	Northing	Record Type	Land Ownership	Most Recent Observation
12	743926	4294028	observation	BLM	2009
12	691036	4239940	observation	BLM	2009
12	691207	4239827	observation	BLM	2009
13	249250	4277675	observation	BLM	2008
12	708714	4245019	observation	Private	2008
12	712817	4235189	observation	Private	2005
13	239265	4289023	nest site	Private	2009
12*	717545*	4216245*	observation	-	2008
12*	716197*	4216681*	observation	-	2009
12*	713124*	4212704*	observation	-	2001
12*	712118*	4218630*	observation	-	2001
12*	704498*	4218630*	observation	-	2001
12*	707117*	4215758*	observation	-	2003

*outside UFO boundary

Discussion and Recommendations

In order to conserve Peregrine Falcons on lands managed by the UFO it will be necessary to manage areas specifically for this species. We recommend limiting recreational activities in areas where Peregrine Falcons nested in 2009 and other known historical nesting sites. A “no recreation” buffer zone should be enforced in early spring when Peregrine Falcons return to breed around all historical nest sites. This will increase the chance that falcons will return to those areas to nest. A biologist should visit these sites each spring to determine if falcons have returned. If the birds do not return to these sites to breed, then the BLM can open those areas for recreation.

The BLM should consider management restrictions for locations where Burrowing Owls have been found on lands managed by the UFO during the breeding season. All management considerations should be carefully evaluated in these areas and the BLM should place buffer zones around active prairie dog towns being used by the owls. There is no established method for conserving white-tailed prairie dogs and one of the greatest threats that they face is disease, which is out of the control of land managers. However, setting aside several protected areas for white-tailed prairie dogs would provide potential nest sites for Burrowing Owls.

The BLM should also consider experimenting with artificial burrows to provide potential breeding habitat for Burrowing Owls. This technique has worked in other locations in the western United States with public and private land interface. There has been limited research with this technique in remote areas and, if it proves successful, may provide additional nesting locations and some control over where the owls choose to breed (Clark 2001).

The UFO should continue inventory work for Peregrine Falcons and Burrowing Owls on the lands that they manage. Additional effort will result in acquiring valuable information about the specific habitat requirements needed by these species in this area. If funding can be secured for more inventories and monitoring for these species there will be tremendous long-term benefits towards the conservation of Peregrine Falcons and Burrowing Owls.

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