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CLIFF-NESTING RAPTORS IN BOULDER COUNTY

1998 STATUS REPORT

4303

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INTRODUCTION

The mountain front in Boulder County as well as the entire Front Range provides excellent habitat for cliff-nesting raptors such as golden eagles, prairie falcons and peregrine falcons. Precipitous cliffs offer nesting sites that are relatively secure from predators, while the nearby plains and shrublands harbor good populations of prey species such as prairie dogs, rabbits, small rodents and birds. This habitat is also used by humans, who affect the raptors in many ways. Some of their actions may be beneficial to raptors, such as land use practices that encourage increases in prairie dog populations, but more of them are detrimental. Disturbance to nesting birds by rock climbers is a direct impact; indirect impacts such as home building on grasslands that previously supported numerous prey animals are severe threats also.

Fortunately, in Boulder County much of the raptors' habitat, including nest sites and hunting grounds, is protected as parks and open space, where disturbances caused by human activities can be minimized. We have been able to maintain good populations of these birds of prey, thanks in part to the efforts of many land management agency employees and volunteers who have monitored nest sites, worked on management policies, and educated other people as to the importance of protecting raptors.

1998 was the sixteenth year of a study of nesting golden eagles and prairie falcons in Boulder County conducted by the Boulder County Nature Association (BCNA), City of Boulder Mountain Parks, City of Boulder Open Space, Boulder County Parks and Open Space, and the Colorado Division of Wildlife. Since 1991, peregrine falcons have been nesting within the study area, and their status has been monitored as well. The study's objectives are to:

- Locate active nests
- Measure productivity (number of young hatched and fledged)
- Monitor nests to document and prevent human disturbance
- Work with governmental agencies, land managers, and conservation groups to protect the raptors' habitat
- Locate and map important hunting territories

Numerous volunteers as well as ranger staff are involved in nest monitoring. Nests are watched with binoculars and spotting scopes from a sufficient distance so as not to disturb the raptors. Observations of nesting status, the birds' behavior, any disturbance to the birds, and other pertinent information are recorded. Databases of this information are maintained by the Mountain Parks, City Open Space, and the Boulder County Nature Association.

In some previous years, when there was sufficient time and volunteer assistance, many nests in Jefferson and Larimer counties were also monitored, to gain a broader regional perspective of raptor populations. Last year the Jefferson County Open Space Department began its own monitoring program. We did not have the time and personnel to do extensive field work in Larimer County this year.

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they used decades ago. In some instances, such as the Mickey Mouse Wall area of Eldorado Mountain, the two species have been able to nest fairly close to each other and both produce young. In other areas the prairie falcons abandon nest attempts, and we do not know if they successfully relocate to a distant territory. Table 2 summarizes the status of each nesting territory from 1983 to 1998.

- **Bull Gulch** (private). Not investigated. This site is actually in Jefferson County, but is sometimes monitored in this study as it is very close to Boulder County.
- **Eldorado Mountain (Mickey Mouse Wall)** (City of Boulder Open Space). Active; nesting status unknown.
- **Eldorado Canyon** (Eldorado State Park). Active; two young fledged from Red Garden Wall.
- **Shadow Canyon** (Boulder Mountain Parks). Inactive.
- **Fern Canyon** (Boulder Mountain Parks). Active; three young fledged.
- **Bear Canyon** (Boulder Mountain Parks). Active; three young fledged. This was the first active nest in this territory since 1988.
- **Third Flatiron** (Boulder Mountain Parks). This territory was used by peregrines.
- **Mount Sanitas** (private). Not investigated.
- **Steamboat Mountain** (private). Not investigated.

Some prairie falcon activity has been noted at two additional sites in the county, Hall Ranch and lower South St. Vrain Canyon. No successful nesting has been observed; these areas should be monitored in the future.

Peregrine Falcon

In 1998, three sites were known to be active. One failed, while two successfully fledged a total of 5 young. This species is making a very good comeback to Boulder County. Table 3 summarizes nesting status from 1991 to 1998.

- **Eldorado Mountain** (Boulder City Open Space). Active; one young fledged.
- **Matron** (Boulder City Open Space). Active; four young fledged.
- **Shadow Canyon** (Boulder Mountain Parks). Inactive, as the alternate site at the Matron was used.
- **Third Flatiron** (Boulder Mountain Parks). Active, but nest failed during incubation (2 eggs laid.)
- **Steamboat Mountain** (private). Not investigated.

Another site in South St. Vrain Canyon was occupied, but not monitored sufficiently to determine whether nesting occurred; it should be watched more in the future.

| Table 1. Boulder County Golden Eagle nest status | | | | | | | | |
|---|------------------|--|--|---|--|-------------------------------|-------------------------------|----------------------------------|
| Territory (south to north) | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 19 |
| Eldorado Springs (Eldorado Canyon) | 1 adult seen | Incub., Mouse Ears; failed | Terr. active* | 1 yg. fledged,** N. of Mouse E. | Terr. active | Undetermined | Undetermined | Terr. act |
| Skunk Canyon | Not investigated | 2 yg. fledged, Inferno | 1 yg. fledged, Inferno | 2 yg. fledged, Superpower | 2 yg. fledged, Inferno | Terr. active, did not nest | Terr. active, did not nest | 2 yg. fle Inferno |
| Boulder Canyon | Terr. active | Terr. active | 2 yg. fledged, Eagle Rock | 1 yg. fledged, Eagle Rock | At least 1 yg. fledged, Bitty Buttress | Undetermined | Incub. Eag. Rock; failed | 1 yg. fle Blob Ro yg. died |
| North Fork | Terr. active | Terr. active | 2 subadults seen | Not investigated | Undetermined | Undetermined | Undetermined | Not inve |
| Boulder North | Not investigated | Not investigated | Not investigated | Not investigated | Not investigated | Not investigated | Not investigated | Not inve |
| Lefthand Palisades | 1 yg. fledged | Terr. active | 2 yg. fledged | 2 yg. fledged | 1 yg. fledged | Incub.; nest failed | 1 yg. fledged | Nest fai |
| Lower St. Vrain | Terr. active | New mate; late nest-building, unsuccessful | 2 yg., nest fell off cliff; fate unknown | 2 yg. fledged, "Cracking Dome" nest | 2 yg. fledged, "Cracking Dome" nest | 1 yg. fledged | Terr. active | Terr. act taken ov ravens |
| Upper St. Vrain | Terr. active | 1 yg., S. Sheep Mtn.*** | Terr. active | Terr. active | Terr. active | Terr. active | 2 yg. S. Sheep Mtn. | Terr. act |
| Lyons | Not investigated | Not investigated | Not investigated | Not investigated | 1 yg., tree nest Stone Canyon | Pair carry- ing sticks | 2 yg. | At least fledged |
| Rabbit Mtn. | Not investigated | Not investigated | Not investigated | Not investigated | Not investigated | Not investigated | Not investigated | Not inve |
| Total young presumed fledged from 10 territories | 1 | 3 | 7 | 8 | 7 | 1 | 5 | |
| †Undetermined means insufficient field work to establish territory status. | | | | | | | | |
| *Territory active means frequent sightings of eagles in territory, but no active nest found. | | | | | | | | |
| **Young fledged means either that young were observed flying or that they were fully feathered and successful fledging was assumed. | | | | | | | | |
| ***If fledging not specified, means that young were seen early in the season and later visits were not made to confirm fledging. | | | | | | | | |

Table 3. Boulder County Peregrine Falcon nest status

| Territory | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------|-------------------------|-------------------------|-------------------------|----------------|-------------|--|---------------|---------------|
| Eldorado Mtn. | Inactive*** | Inactive | Inactive | Inactive | Inactive | 1 yg. fledged; | 3 yg. fledged | 1 yg. fledged |
| | | | | | | (2 eggs) | | |
| Matron | 3 yg. fledged** | Alternate | Alternate | 2 yg. hatched, | Alternate | 3 yg. fledged; | 3 yg. fledged | 4 yg. fledged |
| | | site used | site used | nest failed | site used | | | |
| Shadow Canyon | Inactive | 1 yg. fledged | 2 yg. fledged | Alternate | Nest failed | Alternate | Alternate | Alternate |
| | | | | site used | site used | site used | site used | site used |
| Steamboat Mtn. | Terr. active* | Inactive | Inactive | Inactive | Inactive | Undetermined† | Undetermined | Undetermined |
| Third Flatiron | Used by prairie falcons | Used by prairie falcons | Used by prairie falcons | 2 yg. fledged | Nest failed | Active; female | 3 yg. fledged | Nest failed. |
| | | | | | | hybrid & eggs removed, OW. | | |
| | | | | | | Re-nest w/ new mate failed (1 of 2 eggs hatched; yg. died) | | |
| Total yg. known out of 4 territories | 3 | 1 | 2 | 2 | 0 | 4 | 9 | 5 |

*Territory active means frequent sightings of falcons in territory, but no active nest found.

**Young fledged means that either young were observed flying or they were fully feathered and successful fledging was assumed.

***Inactive means we saw no peregrine falcons during our visits and assumed territory to be unoccupied by this species.

†Undetermined means insufficient field work to establish territory status.