

LEDERER

BOULDER COUNTY NATURE ASSOCIATION

Cliff-Nesting Raptors in Boulder County,  
OSMP Studies 4250

February 8, 2000

Study



+250

Nan Lederer

To Distribution List,

Enclosed is a copy of "Cliff-Nesting Raptors in Boulder County, 1999 Status Report". This is an annual report on the results of an ongoing project to monitor nests of golden eagles, prairie falcons, and peregrine falcons in Boulder County and vicinity. This long-term study has been conducted by numerous local government agencies with jurisdiction over public lands, and the Boulder County Nature Association, which has been compiling data from the various agencies.

We will be continuing this project in 2000 and coming years; your continued participation will be appreciated. If you have any questions or comments, please contact me.

Sincerely,

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Distribution List:

- Phil Aragon, Colorado Division of Wildlife
- Steve Armstead, Boulder Mountain Parks
- Beverly Baker, U.S. Forest Service
- Rick Basagoitia, Colorado Division of Wildlife
- Mark Brennan, Boulder County Parks & Open Space Dept.
- Daryl Burkhard, Larimer County Parks and Open Lands
- Jerry Craig, Colorado Division of Wildlife
- Bob Dellapina, Boulder Mountain Parks
- Patt Dorsey, Colorado Division of Wildlife
- Mike Figgs, Boulder County Nature Association
- Janet George, Colorado Division of Wildlife
- Randy Gietzen, Boulder County Nature Association
- Dave Hallock, Boulder County Parks and Open Space Dept.
- Libby Henits, Boulder County Parks and Open Space Dept.
- Steve Jones, Boulder County Nature Association
- Tina Jungwirth, Colorado Division of Wildlife
- Tim Metzger, Eldorado Canyon State Park
- Becky Parmenter, U.S. Forest Service
- Brian Posthumus, Jefferson County Open Space Dept.
- Cary Richardson, City of Boulder Open Space Dept.
- Mike Sherman, Colorado Division of Wildlife

# CLIFF-NESTING RAPTORS IN BOULDER COUNTY

## 1999 STATUS REPORT

### A Compilation of Data from Numerous Agencies and Groups that Monitor Nests of Golden Eagles, Prairie Falcons and Peregrine Falcons

Compiled by Nan Lederer, Boulder County Nature Association  
February 10, 2000

## 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, established and enforced management policies, and educated

other people as to the importance of protecting raptors.



1999 was the seventeenth 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, the Colorado Division of Wildlife, and Eldorado State Park. 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 by the Boulder County Nature Association and the Jefferson County Nature Association, to gain a broader regional perspective of raptor populations. In 1997 the Jefferson County Open Space Department began its own monitoring program. A similar program is needed in Larimer County.

## 1999 NEST STATUS

### Golden Eagle

Table 1 summarizes the status of each nesting territory from 1982 to 1999.

Of the 10 known territories in the study area, 7 were investigated in 1999. All of these were active, with 5 known successful nests producing a total of 7 young. This represents a good reproductive rate for the county. The highest number of young ever documented in one year in the study is 8 (in 1985, 1990, 1993, and 1998). The average number over the past 17 years is 5.3. Of course there is variation from year to year in the intensity of field work. All numbers of active nests and young produced are minimum numbers.

Each territory is discussed below, in order from south to north. Land ownership/jurisdiction for each nest site is indicated. Due to limited field observation time, young birds are rarely seen in the act of fledging or shortly thereafter, while still in the nest vicinity. We assume that a young bird has successfully fledged if we have observed it on the nest shortly before fledging time, and it appears healthy and fully feathered or nearly so.

- **Eldorado Springs** (City of Boulder Open Space and Eldorado State Park). Apparently inactive. No definite nest activity has taken place in this territory since 1985.
- **Skunk Canyon** (Boulder Mountain Parks). Active; two young fledged.
- **Boulder Canyon** (Forest Service). Active; one young fledged.
- **North Fork of Middle Boulder Creek** (West of town of Eldora; Forest Service). No active nest has been found since the 1950's, but adult eagles are sometimes sighted in the territory.
- **Boulder North** (Private). Territory not investigated.
- **Lefthand Palisades** (Boulder Mountain Parks). Active; one young fledged.
- **St. Vrain Canyon, Lower** (Forest Service). Active; two young fledged.
- **St. Vrain Canyon, Upper** (Forest Service). Territory occupied, but no active nest found.
- **Lyons / Meadow Park** (Boulder County/Town of Lyons). Territory occupied, but no active nest found.
- **Rabbit Mountain** (Boulder County). Active; one young fledged.

## **Prairie Falcon**

Table 2 summarizes the status of each nesting territory from 1983 to 1999.

1999 status of breeding territories is shown below, in order from south to north. Eight of the total 11 known territories in the study area were investigated. Seven were active; five of these were known to have produced young, with a total of 11 to 14 young fledged. Some territories that have been used in recent years by prairie falcons are now being occupied by the more aggressive peregrine falcons, who are returning to reclaim territories 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. One new active territory was found in Boulder Mountain Park this year; however, the nest failed.

Even the lower estimate of 11 young produced is higher than the average number over the last 16 years (9.5). Part of the reason for this is certainly the greater intensity of nest monitoring effort during the last several years compared to the first few.

An encouraging observation is that the prairie falcons seem to be recovering from the impact of the increasing peregrine falcon population. The peregrines began displacing prairies in the Boulder Mountain Parks in 1993. The average number of prairie falcon young produced during the 6-year period 1993 to 1998 was 6.7, approximately half of this year's production.

- **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; the prairies were chased from the Mickey Mouse Wall proper by peregrines, but successfully nested nearby, east of the railroad tracks, fledging two or three young.
- **Eldorado Canyon** (Eldorado State Park). Active; two young fledged.
- **Shadow Canyon** (Boulder Mountain Parks). Active; three or four young fledged.
- **Fern Canyon** (Boulder Mountain Parks). Active; two or three young fledged.
- **Bear Canyon** (Boulder Mountain Parks). Active; nest with 4 eggs was abandoned for unknown reasons.
- **Third Flatiron** (Boulder Mountain Parks). This territory was occupied by peregrines.
- **Mount Sanitas** (private). Not investigated.
- **South St. Vrain Canyon** (Forest Service). Active; at least two young fledged.
- **Hall Ranch** (Boulder County Parks & Open Space). Apparently inactive.
- **Steamboat Mountain** (private). Not investigated.

## **Peregrine Falcon**

In 1999, three sites were known to be active, with two of them nesting. One failed, while the other successfully fledged three young. This species is making a very good comeback in Boulder County. Table 3 summarizes nesting status from 1991 to 1999.

- **Eldorado Mountain** (Boulder City Open Space). Active; three young fledged.
- **Matron** (Boulder City Open Space). 2 young hatched, but nest failed for unknown reasons.
- **Shadow Canyon** (Boulder Mountain Parks). Inactive, as the alternate site at the Matron was used.
- **Third Flatiron** (Boulder Mountain Parks). Territory occupied, but no nesting.
- **Steamboat Mountain** (private). Not investigated.

Another site in South St. Vrain Canyon which was occupied last year, was not monitored sufficiently to determine whether it was active this year; it should be watched more in the future.

## PROTECTIVE MANAGEMENT

### Boulder Mountain Parks

Areas surrounding raptor nests are closed to hiking and rock climbing every year starting February 1. Closures are lifted when nesting activity is completed.

### City of Boulder Open Space

Mickey Mouse Wall on Eldorado Mountain and The Matron are closed to rock-climbing from February 1 until after fledging is complete.

### Boulder County Parks and Open Space

The Rabbit Mountain site is closed to recreational use from February 1 through July 31 whenever the nest is active.

### Eldorado State Park

Climbing closures are in effect for falcon nesting areas from February 1 until after young fledge.

### Roosevelt National Forest

Management in the Boulder Canyon territory is complicated, as there are two widely separated nests which the eagles choose between unpredictably. This year, Bitty Buttress was closed to climbing after we ascertained that it was the active nest. No violations were observed, although prior to the area being posted, climbers were observed near the nest on one occasion. The Lower St. Vrain eagle nest in South St. Vrain Canyon has never been posted, because in the past there were very few rock climbers in the area. As climbing activity in that canyon is increasing, it will probably be necessary to close this nest area in the future.

Information about wildlife closures in the area is available at any time from the Boulder FYI phone line, 303-441-4060 ext. 420.

## ACKNOWLEDGMENTS

Many thanks go to the numerous agency staff persons who provided information for this report: Steve Armstead, Rick Hatfield and Bob Dellapina of the Boulder Mountain Parks; Ann Oyer and Emily Spencer of City of Boulder Open Space; Libby Henits of Boulder County Parks and Open Space; Tim Metzger of Eldorado Canyon State Park. Dozens of volunteers and rangers assisted in monitoring nests; their efforts are greatly appreciated.



Table 1. Boulder County Golden Eagle nest status

Territory	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Eldorado Springs	1 adult seen	Incub, Mouse	Terr. active*	1 YG. fledged,**	Terr. active	Undetermined	Undetermined	Terr. active	Undetermined	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive
(Eldorado Canyon)			Ears, failed	N. of Mouse E.														
Skunk Canyon	2 YG. fledged,	1 YG. fledged,	2 YG. fledged,	2 YG. fledged,	2 YG. fledged,	Terr. active,	Terr. active,	2 YG. fledged,	1 YG. died after	Nest failed,	Terr. active, no	1 YG. fledged,	Terr. active,	nest failed	Terr. active, no	1 YG. fledged,	Sup-	1 YG. fledged,
	Not investigated	Inferno	Superpower	Inferno	Inferno	did not nest	did not nest	Inferno	fledging, inferno	Inferno	nest attempt	Terr. active,	Terr. active,	nest attempt	Terr. active, no	1 YG. fledged,	1 YG. fledged,	1 YG. fledged,
Boulder Canyon	Terr. active	Terr. active	Terr. active	2 YG. fledged,	1 YG. fledged,	Incub, Eag,	1 YG. fledged,	2 YG. fledged,	1 YG. fledged,	1 YG. fledged,	Nest failed	Nest failed	Nest failed	Nest failed	Nest failed	Nest failed	Nest failed	Nest failed
				Eagle Rock	Eagle Rock	fledged, Bitty	Blob Rock,	Eagle Rock,	Eagle Rock,	Eagle Rock,	during incub,	during incub,	during incub,	during incub,	during incub,	during incub,	during incub,	during incub,
				Burrass	Burrass		yg. died	yg. died	yg. died	yg. died	yg. died	yg. died	yg. died	yg. died	yg. died	yg. died	yg. died	yg. died
North Fork	Terr. active	Terr. active	2 subadults seen	Undetermined	Undetermined	Undetermined	Undetermined	Not investigated	Terr. active	Terr. active	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated
Boulder North	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated
Leftand Pallsades	1 YG. fledged	Terr. active	2 YG. fledged	2 YG. fledged	1 YG. fledged	Incub. nest	1 YG. fledged	Nest failed	1 YG. fledged,	1 YG. fledged,	1 YG. fledged,	2 YG. fledged,	1 YG. fledged,	1 YG. fledged,	1 YG. fledged,	1 YG. fledged,	2 YG. fledged,	1 YG. fledged
						failed	Palisades South	Palisades North	Palisades North	Palisades North	Palisades North	Palisades North	Hell Ranch	Palisades	Palisades	Palisades North	Palisades North	Palisades North
Lower St. Vrain	Terr. active	Terr. active	2 YG. fledged,	2 YG. fledged,	1 YG. fledged,	Terr. active,	Terr. active,	1 YG. fledged,	1 YG. fledged,	1 YG. fledged,	Terr. active	Inactive	Inactive	Not investigated	Not investigated	Not investigated	Terr. active	Terr. occupied
			nest-building,	off cliff, late	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking
			unsuccessful	unknown	Domne' nest	Domne' nest	Domne' nest	taken over by	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking	Cracking
Upper St. Vrain	Terr. active	1 YG., S. Sheep	Terr. active	Terr. active	Terr. active	Terr. active	2 YG., S. Sheep	Terr. active	Terr. active	Terr. active	Terr. active	Terr. active	Inactive	Not investigated	Not investigated	Terr. active	Terr. active	Terr. occupied
Lyons	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	1 YG., tree nest	Pair carry-	2 YG.	At least 1 YG.	2 YG. fledged,	1 YG. fledged,	1 YG. fledged,	2 YG. fledged,	2 YG. fledged,	2 YG. fledged,	1 YG. fledged,	1 YG. fledged,	Terr. occupied
Rabbit Mtn.	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	Not investigated	2 YG. fledged	Not investigated	Not investigated	1 YG. fledged,	1 YG. fledged,	2 YG. fledged,	1 YG. fledged,	1 YG. fledged,	1 YG. fledged
Total young presumed fledged from 10 territories	1	3	7	8	1	5	4	8	2	3	8	3	5	5	6	8	7	7

\*\*\*If fledging not specified, means that young were seen early in the season and later visits were not made to confirm fledging.  
 \*\*Young fledged means either that young were observed flying or that they were fully feathered and successful fledging was assumed.  
 \*Territory active means frequent sightings of eagles in territory, but no active nest found.  
 †Undetermined means insufficient field work to establish territory status.

Table 3. Boulder County Peregrine Falcon nest status									
Territory (south to north)	1991	1992	1993	1994	1995	1996	1997	1998	1999
Eldorado Mtn.	Inactive***	Inactive	Inactive	Inactive	Inactive	1 yg. fledged; (2 eggs)	3 yg. fledged	1 yg. fledged	3
Matron	3 yg. fledged**	Alternate site used	Alternate site used	2 yg. hatched, nest failed	Alternate site used	3 yg. fledged	3 yg. fledged	4 yg. fledged	2 yg. hatched, nest failed
Shadow Canyon	Inactive	1 yg. fledged	2 yg. fledged	Alternate site used	Nest failed	Alternate site used	Alternate site used	Alternate site used	Alternate site used
Third Flatiron	Used by prairie falcons	Used by prairie falcons	Used by prairie falcons	2 yg. fledged	Nest failed	Active; female hybrid & eggs removed,DOW. Re-nest w/ new mate failed (1 of 2 eggs hatched; yg. died)	3 yg. fledged	Nest failed	Terr. occupied
S. St. Vrain	Need info from CDOW	Need info from CDOW	Need info from CDOW	Need info from CDOW	Need info from CDOW	Need info from CDOW	Need info from CDOW	Terr. occupied, nest status unkn.	Undetermined
Steamboat Mtn.	Terr. active*	Inactive	Inactive	Inactive	Inactive	Undetermined†	Undetermined	Undetermined	Undetermined
Total yg. known out of 6 territories	3	1	2	2	0	4	9	5	3
*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.									