

BOULDER COUNTY AVIAN  
SPECIES OF SPECIAL CONCERN  
2010

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and  
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The Boulder County Nature Association is an all-volunteer, nonprofit organization committed to preserving the natural history of the Boulder County, Colorado region through research, documentation, and public education.

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Cover photo: Long-billed Curlew by George Oetzel

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# **BOULDER COUNTY AVIAN SPECIES OF SPECIAL CONCERN 2010**

## **BACKGROUND**

The scientific study of birds in Boulder County has a history well over 100 years long. Although Colorado's first scientific observations of birds were conducted by Thomas Say of the 1820 Long Expedition, it wasn't until the 1870s that substantial inventories of species were compiled for Boulder County. Early ornithologists focused on identifying new species for inventory lists, often collecting specimens, eggs, and nests for more careful study. However, a shift occurred around the last two decades of that century, when naturalists began observing life histories of birds; amateur ornithologist Denis Gale is noteworthy in Boulder County. As a result, published records began including observations of frequency and nesting. Three benchmark publications were Junius Henderson's 1909 annotated list of birds of Boulder County, Norman DeWitt Betts' 1913 update of Henderson's list, and Gordon Alexander's 1937 article on Boulder County birds. Henderson and Alexander each led the biology program at the University of Colorado, while Betts was stationed in Boulder with the U.S. Forest Service. Subsequently, Alfred M. Bailey and Robert J. Niedrach—longtime Denver Museum of Natural History director and curator of birds, respectively—contributed additional information in their two-volume *Birds of Colorado* (1965). Since these efforts, naturalists, scientists and birders have been conducting additional studies to document and monitor the well-being of birds in the county.

The goal of the Boulder County Nature Association's Avian Species of Special Concern list is to identify those species that are of interest due to their rareness, probable decline, and/or habitat or locational restrictions. Hence, these species are more vulnerable and less adaptable to change and might be in need of concentrated conservation actions. The list focuses on breeding status and is based on a comparison of historic and current records, recent studies, and regional, state and local assessments that represent the best available information and are summarized herein.

The first historical/contemporary comparative list and list of bird species of special interest in Boulder County were compiled by Michael G. Figgs of the Boulder County Nature Association in 1982 in conjunction with a 1983 update to the Environmental Resources Element of the Boulder County Comprehensive Plan. Since then, the Boulder County Avian Species of Special Concern list has been updated several times: in 1984, 1986, 1988, 1993, and 1999. The update process has followed the same basic methodology used for the original document; however, some adjustments have been made to keep the information up to date and to provide a more complete picture of avian species for which we should have extra concern.

## METHODOLOGY

Figgs' original methodology forms the framework for all subsequent updates. To compile the first comparative list, he examined historical bird lists for Boulder County developed by Henderson (1909), Betts (1913) and Alexander (1937). The historic status of each of the 189 species--resident status (migrant, resident all year, summer resident, etc.) and relative abundance (abundant, common, fairly common, rare, etc.)--was then compared with the recognized current status using the best available information: the Boulder County Wildlife Inventory and the Birds of Boulder County Field Checklist, both maintained by the Boulder Audubon Society (now named the Boulder County Audubon Society). Species were then given a comparative status of either extirpated, new, declining, increasing, stable or undetermined.

Species were considered to be declining or increasing if their comparative status changed by two levels of relative abundance; for example from abundant to fairly common or from rare to common. This was done because the historic and recent lists provided only qualitative descriptors. Since it is not known how one list's "common" compared with another list's "fairly common," Figgs felt that a two-level difference was an appropriate minimal indicator of population change.

Adding to the comparative status derived above, Figgs then compiled information from six other national, state and county assessment sources to prepare a list of 76 bird species of special interest in Boulder County. The list was presented in tabular form, indicating each species' status in the various sources, which included federal and state threatened and endangered lists, the Colorado Natural Heritage Inventory's species of special concern list, and the National Audubon Society's Blue List of species with declining populations.

The authors of the present document employed the same foundation methodology as Figgs, but utilized more recent and improved data to compile the information. We examined the historic accounts in Henderson (1909), Betts (1913) and Alexander (1937), but also used Bailey and Niedrach (1965) and Kingery (1998). To assess a species' status beyond the county's boundary, we used federal and state threatened and endangered lists (U.S. Fish and Wildlife Service 2010, and Colorado Division of Wildlife 2009), U.S. Forest Service Sensitive Species and Management Indicator Species (2009 and 1997), Colorado Natural Heritage Program (2009) imperiled and tracked species, and Partners in Flight (2000) conservation priorities for Colorado. Also, we consulted with knowledgeable individuals involved with inventories and research, and we reviewed newer studies that provide information about the status and distribution of avian species in the county. A key new source is the database that the Boulder County Nature Association has maintained since 1999 for sightings of species of concern, including accounts of nests. This database has helped to discern species now more common, those still rare, and those that are relatively new to the landscape.

After we compiled the data from all of the above sources, we identified the species of special concern in Boulder County (more discussion of this below). Each of these species was assigned to one or more categories to indicate its current status (generally the breeding status) in Boulder County: rare and declining; declining; rare; isolated or restricted; needs research; or extirpated.

These species of special concern are further categorized into two levels of concern: primary and watch list. Certain species are of primary concern because of factors such as population decline, rareness, and/or habitat restrictions for uncommon species in Boulder County. The species on the watch list are generally those that are fairly common to common in the county but that merit being monitored due to concerns in the state or region (population decline or threats) or locally (habitat restrictions), or because they are endemic to or concentrated in the Rocky Mountains/Great Basin region.

In the process of identifying the species of special concern in Boulder County, we established criteria for evaluating species in certain situations. The primary list contains a number of species that are rare in the county (found in 3 or fewer known locations). Many of these are peripheral, meaning Boulder County is on the edge of their breeding range, the result of two physiographic regions (Great Plains and Southern Rocky Mountains) meeting in the county. Over the years there has been some debate about retaining these species on the list. We continue to keep them. For most, there is good evidence that they have been a part of our landscape since records were first kept, so we conclude that they are established. Their continued well-being may provide information about our stewardship of the land.

In recent years, a number of new species have been found breeding in the county. It is probable that for some of these species, the relationship with the county will be short-term. Only if a species becomes well-established and a regular breeder in the landscape, or if there are concerns at a state, regional or national level, should it be considered for inclusion on the list. Recent breeders not meeting those criteria, and so not included on the list, are Least Flycatcher, Marsh Wren, Eastern Bluebird, Chestnut-sided Warbler, Rose-breasted Grosbeak, and Orchard Oriole. However, recent breeders included on the list are Green Heron, Wood Duck, Great Egret, Osprey, Bald Eagle, and Hooded Warbler.

Several other species made the list for particular circumstances. Ferruginous Hawk, Rough-legged Hawk, American Dipper, and Short-eared Owl are on the list because they have significant winter concentrations in a few locations. White-tailed Ptarmigan is also of concern because of greater locational restrictions in the winter.

The data and information that we compiled and analyzed are presented in two formats. First, a table lists all species of concern, and presents assessment data from the external sources, as well as the BCNA category for status within the county. Primary species of concern are indicated on the table with bold type. Changes in this year's table include the following: We have gone back to showing the state rankings for the Colorado Natural Heritage Program (CNHP) list, along with the tracking status. Also, the Partners in Flight (PIF) list now shows only priority species without including rankings. The second section consists of narrative accounts of the species of primary concern that can still be found in the county, including information about habitat, historic status, current status, and recent observations.

## RESULTS AND CHANGES FOR 2010

In aggregate numbers, there has been little change between the 1999 and 2010 editions of Boulder County Avian Species of Concern. The table below summarizes a comparison between the two editions.

	<b>1999</b>	<b>2010</b>
Total species of concern in Boulder County*	58	58
Total species of primary concern	33	34
Total species on the watch list*	25	24
1: Rare and Declining	11	10
2: Declining	1	0
3: Rare	13	11
4: Isolated or Restricted	44	46
5: Needs Research	5	7
6: Extirpated	4	4
<p>* Not included in this count are three 1999 species and two 2010 species; BCNA did not assign them to a concern category for Boulder County, but had included them in the lists only because they were considered to be of concern beyond the county by one or more of the exterior sources. The 1999 species were Bald Eagle, MacGillivray's Warbler, and Western Tanager, and the 2010 species were Pygmy Nuthatch and MacGillivray's Warbler.</p> <p>Note: Categories 1 through 6 do not total because some species were assigned to multiple categories.</p>		

However, even though the aggregate numbers are not significantly different, changes have occurred for individual species, both within Boulder County and elsewhere. Changes in the BCNA categories assigned to species were the following:

- Added: Green Heron and Hooded Warbler. Both have been consistent breeders over the last decade. They need additional research and are considered Isolated and Restricted. Rough-legged Hawk is also listed as winter concentrations are being impacted by fragmentation.
- Deleted: Barn Owl, Gray Catbird, Western Tanager, and Yellow-headed Blackbird. These species appear to be more common and widespread than past records indicated and do not warrant being retained.



- No longer Rare but still Isolated and Restricted: American Bittern, Osprey and Burrowing Owl. More nest sites are being found, but these birds still warrant listing as species of concern.
- Moved from Declining to Rare and Declining: Willow Flycatcher. There are no confirmed nesting records over the past decade, but there was one promising recent sighting during the breeding season in the foothills.
- Upgraded from watch list to primary concern: Northern Goshawk and Grasshopper Sparrow. Reviewers felt these two species merited a higher level of concern.
- Moved from Isolated or Restricted to no category: Pygmy Nuthatch. They are restricted to mature stands of ponderosa pine, but otherwise are fairly widespread. They are retained on the list because of their listing by the U.S. Forest Service as a Management Indicator Species.
- Still Rare and Declining, and also Isolated or Restricted, and now Needs Research as well: Brown Thrasher. There is a lack of information from potential eastern county sites.

It is worth noting that several listed species have not been documented nesting in the county since BCNA began this list in 1982: Eared Grebe, Willow Flycatcher, Loggerhead Shrike, Veery, Brown Thrasher, American Redstart, and Ovenbird.

In addition to the changes in the status within the county, there have been status changes beyond the county for several species, according to the source lists:

- In August 1999, the Peregrine Falcon was removed from the federal List of Endangered and Threatened Wildlife (U.S. Fish and Wildlife 1999). In Colorado, the population increased from five known pairs in 1976 to well over 100 pairs in 2005. Even so, the American Peregrine Falcon has been added to the state list as a species of special concern.
- In 2007, the Bald Eagle was also removed from the federal endangered and threatened list in the lower 48 states (U.S. Fish and Wildlife Service July 2007). Likewise, the Bald Eagle was removed from the state's threatened species list effective May 2009, but was kept on the state list as a species of special concern. (Colorado Division of Wildlife March 2009).
- The Mountain Plover was proposed for federal listing as threatened in 1999 and 2002; the proposal was withdrawn in 2003. However, in June 2010, the species was again proposed as threatened. (U.S. Fish and Wildlife 2010)
- Barrow's Goldeneye is no longer state listed.

## ASSESSMENT SOURCES AND DESIGNATIONS

**Federal Status:** U.S. Fish and Wildlife Service, Endangered Species Program - Federal List of Endangered and Threatened Wildlife (U.S. Fish and Wildlife Service, 2010) Species are identified per the Endangered Species Act.

<b>LE</b>	Listed Endangered	In danger of extinction within the foreseeable future throughout all or a significant portion of its range.
<b>PE</b>	Proposed Endangered	Proposed in the Federal Register to be listed as Endangered
<b>LT</b>	Listed Threatened	Likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
<b>PT</b>	Proposed Threatened	Proposed in the Federal Register to be listed as Threatened

**State Status:** Department of Natural Resources, Division of Wildlife - Colorado Threatened or Endangered Species and Colorado Species of Special Concern (Colorado Division of Wildlife July 2009). The list is prepared per the Colorado Revised Statutes.

<b>E</b>	Endangered	Prospects for survival or recruitment within this state are in jeopardy
<b>T</b>	Threatened	Not in immediate jeopardy of extinction, but vulnerable due to small numbers, restricted throughout its range, or experiencing low recruitment or survival
<b>SC</b>	Special Concern	

**U.S. Forest Service (USFS):** U. S. Forest Service Rocky Mountain Region (Region 2) - Sensitive Species List (U.S. Forest Service 2009)

<b>S</b>	Sensitive	Population viability is a concern as evidenced by: a) significant current or predicted downward trends in population numbers or density; or b) significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.
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**Arapaho and Roosevelt National Forests and Pawnee National Grasslands: Management Indicator Species (U.S. Forest Service 1997 and 2005)**

M	Management Indicator Species	Population changes are believed to indicate the effects of management activities.
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**Colorado Natural Heritage Program (CNHP):** Statewide List of Tracked Species and Communities (Colorado Natural Heritage Program 2009). CNHP is a nonprofit organization sponsored by the Warner College of Natural Resources at Colorado State University (CSU), and is housed inside CSU's Department of Fish, Wildlife & Conservation Biology. CNHP employs a standardized method for evaluating the relative imperilment of species. A number of factors are considered in assessing conservation status, including number of populations, population size, range, short- and long-term trends, threats, number of protected occurrences, vulnerability, and environmental specificity.

State Imperilment Rank (S): Based on the relative rarity or endangerment statewide.

S1	Critically imperiled in state	Extreme rarity (5 or fewer occurrences, or very few remaining individuals), or some factor of its biology makes it especially vulnerable to extirpation from the state. (Critically endangered in state).
S2	Imperiled in state	Rarity (6-20 occurrences), or other factors demonstrably make it very vulnerable to extirpation from the state. (Endangered throughout its range).
S3	Rare or uncommon in state	21 to 100 occurrences
S4	Apparently secure in state	
S5	Demonstrably secure in state	
S#B	Breeding season imperilment	Breeding season imperilment of elements that are not permanent residents.
S#N	Non-breeding season imperilment	Non-breeding season imperilment of elements that are not permanent residents.

Note: Where two numbers appear in a state rank (for example, S2S3), the actual rank of the element falls between the two numbers.

Tracking Status: Criteria that CNHP uses to determine if it will track the species include

1. rarity (in terms of geographic range, habitat specificity, and local population size),
2. evolutionarily distinct or isolated (in time or space); and
3. endemism (restricted in geographic or habitat distribution).

<b>Y</b>	Species is a conservation concern (Y = Yes)	It meets criteria for tracking with regard to its populations in Colorado. All extant and selected historical occurrences are maintained in CNHP data system.
<b>P</b>	Partial	Only those occurrences of high quality or of a specified population are tracked.
<b>W</b>	Watch list	Only those occurrences of high quality or of a specified population are tracked.

**Partners in Flight (PIF)**, Colorado Partners in Flight. (Partners in Flight 2000). This international nongovernmental organization is dedicated to encouraging conservation of bird populations in the western hemisphere. Colorado Partners in Flight's mission is to promote and enhance conservation and management efforts for Colorado birds. The PIF Species Prioritization Process evaluates a number of variables relating to conservation vulnerability. Sources include range maps, Breeding Bird Survey data and opinions of a Prioritization Technical Committee.

<b>P</b>	Priority Species	Species that ranked highest for consideration for conservation actions.
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**Boulder County Nature Association (BCNA):** Boulder County Nature Association Avian Species of Special Concern (2010). BCNA maintains a list of species within the county that are rare, appear to be declining and/or are restricted in distribution within Boulder County. The list generally focuses on breeding status.

<b>1</b>	Rare and Declining	
<b>2</b>	Declining (but not yet rare)	A documented long-term, non-cyclical downward trend.
<b>3</b>	Rare	An average of three or fewer documented nest sites in the county during each of the past 10 years
<b>4</b>	Isolated or Restricted	Species that are found only at a few favored locations and/or that occupy narrow habitat niches
<b>5</b>	Needs Research	
<b>6</b>	Extirpated	A species that occurred in Boulder County at the time of Euro-American settlement that has since disappeared from the county.
<b>W</b>	Winter	
<b>Bold</b>	Primary concern	
Not Bold	Watch List	

**BOULDER COUNTY AVIAN SPECIES OF SPECIAL CONCERN - 2010**

(Bolded species are of primary concern in Boulder County; non-bolded are on watch list)

SPECIES	Federal Status	State Status	USFS	CNHP	PIF	BCNA
Wood Duck						4
Ring-necked Duck						4
<b>Barrow's Goldeneye</b>				S2B; Y		6
White-tailed Ptarmigan			S	S4; P	P	4W
<b>Plains Sharp-tailed Grouse</b>		E		S1; Y	P	6
<b>Northern Bobwhite</b>						1
<b>Eared Grebe</b>						1
Double-crested Cormorant						4
<b>American Bittern</b>			S			4
<b>Least Bittern</b>						3, 4
Great Blue Heron						4
<b>Great Egret</b>						3, 4
Green Heron						4, 5
Black-crowned Night-Heron						4
<b>Osprey</b>						4
<b>Bald Eagle</b>		SC	S	S1B; S3N; Y		4
<b>Northern Harrier</b>			S		P	1, 4
<b>Northern Goshawk</b>			S3b; W			4, 5
Swainson's Hawk					P	4
Ferruginous Hawk		SC	S, M	S3B; S4N; Y	P	4W
Rough-legged Hawk						4W
<b>Golden Eagle</b>						4

<b>SPECIES</b>	<b>Federal Status</b>	<b>State Status</b>	<b>USFS</b>	<b>CNHP</b>	<b>PIF</b>	<b>BCNA</b>
<b>Peregrine Falcon</b>		SC	S	S2B; Y	P	3, 4
<b>Prairie Falcon</b>				S4B; S4N; W	P	4
<b>Mountain Plover</b>	PT	SC	S, M	S2B; Y	P	6
<b>Long-billed Curlew</b>		SC	S	S2B; Y	P	6
Flammulated Owl		S			P	4
<b>Burrowing Owl</b>		T	S, M	S4B; W	P	4
<b>Long-eared Owl</b>						1
<b>Short-eared Owl</b>			S	S2B;Y	P	3, 4W
Boreal Owl			S	S2; P	P	4, 5
<b>Black Swift</b>			S	S3B; Y	P	3,4
<b>Lewis's Woodpecker</b>			S	S4; Y	P	1,4
<b>Red-headed Woodpecker</b>						1,4
Three-toed Woodpecker			S			4
Olive-sided Flycatcher			S		P	4
<b>Willow Flycatcher</b>				S4; W		1, 4
<b>Loggerhead Shrike</b>			S			1, 4
Western Scrub-Jay						4
<b>Bank Swallow</b>						3, 4
Bushtit						4
Pygmy Nuthatch			M			
American Dipper					P	4W
Golden-crowned Kinglet			M			4
<b>Veery</b>				S3B; W		3
<b>Northern Mockingbird</b>						3, 4
<b>Sage Thrasher</b>						3, 4

<b>SPECIES</b>	<b>Federal Status</b>	<b>State Status</b>	<b>USFS</b>	<b>CNHP</b>	<b>PIF</b>	<b>BCNA</b>
<b>Brown Thrasher</b>						1, 4, 5
Cedar Waxwing						4
<b>American Redstart</b>						3
<b>Ovenbird</b>				S2B; Y		3. 5
MacGillivray's Warbler					P	
Hooded Warbler			M			4, 5
<b>Lark Bunting</b>					P	1
Savannah Sparrow						4
<b>Grasshopper Sparrow</b>			S		P	4
Fox Sparrow						4
<b>Bobolink</b>				S3B; W		4
Brown-capped Rosy-Finch				S3B; S4N; P	P	4
White-winged Crossbill				S1B; W		5

## ACCOUNTS OF PRIMARY SPECIES OF CONCERN

This section consists of narrative accounts of the species of primary concern that can still be found in the county, including information about habitat, historic status, current status, and recent observations. These accounts are generalized from historical studies and lists, as well as from observations reported more recently to the Boulder County Nature Association and the Boulder County Audubon Society. Names of reporting individuals are given in parentheses, and a list of these individuals and their affiliations is provided on page 28. Their observations are entered on spreadsheets, which can be requested from BCNA.

### BCNA Category 1: Rare and Declining

#### Northern Bobwhite

Habitat: Breeds in grasslands, streambottom thickets, and cultivated fields. Nest consists of a shallow depression generally lined with grass and concealed by an arch of vegetation.

Historic Status: Common Breeder.

*On account of the introduction of Eastern birds, its status as a native is not known. Gale recorded a nest with 13 eggs, May 17, 1888. (Betts 1913).*

*Cooke states that quail were introduced from Pueblo north to Fort Collins, but it seems likely that at the time of Gale's observations in 1888, introduced birds had not become established, and we are inclined to believe that the range of native Bobwhite extended to the foothills. (Bailey and Niedrach 1965).*

Current Status: Casual Breeder. Declining.

Recent Observations: It is uncertain whether Northern Bobwhite is native to Boulder County. At least some of the historic population was documented as being introduced, and Boulder County appears to be peripheral to the species' normal range. Our most recent nesting confirmation within Boulder County was a pair with fledged young at Boulder Valley Ranch Sage Trail on Boulder open space in June 1990 (Stephen Jones). Individuals were observed on Gunbarrel Hill in June 2001 and at the Teller Farms north trailhead on Boulder open space in 2007 (Boulder County Nature Association 2010).

#### Eared Grebe

Habitat: Breeds on marshes, ponds, and lakes. These colonial nesters build platform nests from marsh growth in shallow areas.

Historic Status: Rare Breeder.

*Summer resident about the plains, lakes, not common. One in University collection. Gale found its nest in or near the county (Henderson 1909).*



*Numerous early records indicate these grebes were once regular breeding birds, but unstable water levels and increased use of lakes and reservoirs by man contributed to the elimination of nesting communities. (Bailey and Niedrach 1965).*

Current Status: Uncommon Migrant and Winter Visitor.

Recent Observations: Fluctuating water levels and recreational use of reservoirs continue to be a management concern for nesting eared grebes throughout the state. We know of no Boulder County nesting confirmations since this list was first compiled in 1982.

## **Northern Harrier**

Habitat: Breeds around marshes, constructing a nest of sticks and/or grass on moist ground.

Historic Status: Fairly Common Breeder

*Common summer resident of plains. (Henderson 1909).*

*Infrequent to common summer resident, but may occur in winter. Most common on plains, but occasionally seen up to 10,500 feet. (Alexander 1937).*

Current Status: Rare Breeder. Declining.

Recent Observations: Boulder Reservoir is the only location where successful nesting has been documented since 1997. Previously documented sites include Prince Lakes, between Erie and Lafayette, and Powers Marsh in Lafayette. In 2004, 2 nests near Boulder Reservoir fledged a total of 8 young. Eight consecutive nesting attempts failed between 2005 and 08. A 2009 nest fledged 4 young, and a 2010 nest fledged 3 young (Jones 2010). A nest at Lagerman Reservoir failed in June 2010 (Susan Spaulding). We suspect that predation by urban-adapted mammals (including raccoon, red fox, and coyote) is contributing to nest failures. As ground nesters, Northern Harriers also are exposed to disturbance from humans, livestock, flooding, and loss of wetlands.

## **Long-eared Owl**

Habitat: Nests in deciduous and coniferous thickets, often near water. They usually lay their eggs in abandoned nests of crows, magpies, ravens, hawks, and squirrels.

Historic Status: Common Breeder.

*Permanent resident: common. Gale took many sets of eggs between April 13 and May 16, apparently in the creek valleys in the Yellow Pine zone and at the western edge of the Plains (Betts 1913).*

Current Status: Rare Breeder. Declining.

Recent Observations: Nests were reported in Skunk Canyon in the Boulder Mountain Park in 1985-8 (Jones 1990) and at White Rocks Natural Area in 1985-6 (Thompson and Strauch

1986). We received no nest reports from 1989-2003. Nesting seems to have increased recently, with nests reported at Heil Ranch (2004-06; Susan Spaulding); a dense shelterbelt along 119th St in Erie (2004-07; Susan Spaulding and Stephen Jones); a shelterbelt at the Sullivan Ranch near White Rocks (2006, Linda Andes-Georges); a city park in North Louisville (2008, Bill Eeds); Shanahan Ridge in the Boulder Mountain Park (2008, Christian Nunes); and Bull Gulch on Boulder open space (2008, Christian Nunes). We suspect that predation by and competition with increasingly more common Great Horned Owls has limited Long-eared Owl nesting success in Boulder County (Jones and Mahoney 2003). It's possible that a few pairs have adapted by nesting in dense thickets and shelterbelts that are less accessible to the larger Great Horned Owls.

### **Lewis's Woodpecker**

Habitat: Riparian woodlands of the plains and foothills, ponderosa pine woodlands, and shrublands. Cavity-nesters, usually using newly excavated holes or old sites in dead trees and limbs.

Historic Status: Common Breeder

*Permanent resident; common in summer in the Yellow Pine zone; infrequent as a wintering bird in the orchards and cottonwoods of the Plains. Eggs have been found from May 28 to June 20 (10 records, mostly Gale). (Betts 1913).*

*Common resident, largely confined to the foothills and wooded areas on the plains. (Alexander 1937).*

Recent Observations: Four nesting sites have been documented since 2000: St. Vrain Creek on the southwest side of Lyons (2001-03; Susan Spaulding), Heil Ranch Open Space (2010; Susan Spaulding), Rabbit Mountain main access road (2001; Boulder County Nature Association 2010), and Douby Draw on Boulder open space (2001; Boulder County Nature Association 2010). Decline has been attributed to absence of fire and increased tree density in ponderosa pine forests and competition for nest sites with European Starlings in plains habitat (Bock 1970, Tobalske 1997). In Colorado Lewis's Woodpecker nesting habitat appeared to shift during the twentieth century from ponderosa pine woodlands to foothills and plains riparian woodlands (Kingery 1998).

### **Red-headed Woodpecker**

Habitat: Breeds in riparian habitat of the plains and foothills. Nests in tree cavities in cottonwoods and willows.

Historic Status: Common Breeder.

*Summer resident; common on the Plains and infrequent in the Yellow Pine zone. Eggs have been found from May 25 to June 28 (4 records). (Betts 1913).*

*Fairly common summer resident on the plains, middle of May to October. (Alexander 1937).*

*They may drill holes, or use old sites, but with increasing abundance of Starlings, there is*

*intense competition for lodging space, and the woodpeckers often are sorely pressed by would-be invaders.* (Bailey and Niedrach 1965).

Recent Observations: We've received no documentation of nesting since 1990, when a pair nested along the Sage Trail at Boulder Valley Ranch Open Space (Stephen Jones). A successful nest was observed near the corner of 41st St. and Oxford Road in 1989 (Stephen Jones). Primary concerns include competition for nesting sites from European Starlings and habitat loss from snag removal (Kingery 1998).

## **Willow Flycatcher**

Habitat: Breeds in plains and foothill riparian areas, generally in the shrub layer. Nest is constructed of bark and stems of vegetation, lined with finer material, and placed in a fork of shrub branches.

Historic Status: Common Breeder.

*Common summer resident of plains and perhaps lower mountains. Five nests in Gale collection, all from the plains, and three contained a cowbird egg each. Felger has one bird taken by Gale at 5500 feet, July 3, 1890.* (Henderson 1909).

*Summer resident; common on the Plains (and probably extending to some extent up the creeks into the Yellow Pine). Gale found eggs from June 3 to July 3. The nests were in low bushes near creeks and were "invariably pensile."* (Betts 1913).

*Moderately common summer resident on plains and along streams of foothills, first of May to last of September.* (Alexander 1937).

Current Status: Rare or Casual Breeder. Declining.

Recent Observations: Late migrants were heard singing along Coal Creek south of Boulder during June 2005, June 2007, and June 2008, but no evidence of nesting was reported (Jones, Andes-Georges, and Hansley 2010). Mary Jane Makepeace observed a pair in Four Mile Canyon in early June 2009. We've received no nesting confirmations since this list was first compiled in 1982.

## **Loggerhead Shrike**

Habitat: Breeds in grasslands, agricultural areas, wooded stream bottoms, mountain meadows, and dry shrublands. They are birds of open country, but their nests are placed in trees and shrubs. The nests are generally bulky, constructed of twigs or bark strips and lined with finer material, and placed in the crotch of a branch or on a large branch near the trunk.

Historic status: Fairly common breeder.

*Summer resident; rather common in the dry eastern portions of the county. Gale found eggs between May 20 and June 25.* (Betts 1913).

*Fairly common summer resident on plains, April to September.* (Alexander 1937).

Current Status: Rare Breeder. Declining.

Recent Observations: We've received no documentation of nesting within Boulder County since this list was first compiled in 1982. The only breeding season observation within this decade was a single individual seen at Carolyn Holmberg Rock Creek Farm Preserve on 1 June 2008 (Boulder County Nature Association 2010). Sharp population declines throughout the West have been attributed to consumption of contaminated prey and loss of nesting sites (Finch 1992).

### **Brown Thrasher**

Habitat: Breeds in streamside riparian habitat and in hedgerows or thickets of agricultural areas. Nests consisting of coarse twigs lined with finer material are placed near the center of a shrub or small tree.

Historic Status: Rare Breeder.

*Summer resident; rare on the Plains. Gale found a nest with four eggs on June 25, 1883, and several nests May 31, 1886. (Betts 1913).*

*Rare summer resident on plains. The writer observed one at Boulder, May 16, 1936 (Alexander 1937).*

Recent Observations: We've received no documentation of nesting in Boulder County since this list was first compiled in 1982. Brown Thrashers nest throughout much of eastern Colorado and appear to have expanded their range as shelterbelts, rural residences, and other human-created habitats have spread (Kingery 1998).

### **Lark Bunting**

Habitat: Breeds in grasslands and meadows. Nests are generally placed in small depressions on the ground and constructed of grasses and forbs.

Historic Status: Abundant Breeder.

*Summer resident; abundant on the dry mesas of the Plains. Eggs have been found between June 1 and 22. (Betts 1913).*

*A common summer resident on the plains, May to September. (Alexander 1937).*

Recent Observations: Greg Hayes reported nesting on his property between Marshall Mesa and Coal Creek, south of Boulder, during the late 1990s. Recent breeding season observations have included Coal Creek west of Superior on 25 June 2004 and 25 July 2005; 79th and Lookout roads on 28 May 2005; Gunbarrel Hill on 25 June 2004; Table Mountain on 25 June 2004; Boulder Cherryvale open space headquarters on 20 July 2003; Marshall Mesa along 66th Street on 20 May 2006; Meyers Gulch on 28 July 2007; South Boulder Creek Trail near Marshall Road on 30 July 2007; Quicksilver county open space southeast of Longmont on 1 June 2008; Rabbit Mountain county open space on 15 July 2004; Keyes North county open space on 28 May 2008 (Boulder County Nature Association 2010). Population declines have been attributed to loss of nesting habitat, changing grazing practices, and grasshopper control practices (Finch 1992). Lark Buntings appear to have declined around most urban centers along the Front Range but are still abundant farther east on the plains (Kingery 1998).

## BCNA Category 3: Rare

### Least Bittern

Habitat: Breeds in freshwater marshes of the plains. The nests are placed near or over water and constructed of sticks or folded marsh vegetation.

Historic Status: Casual Breeder

*Summer resident; probably occurs regularly though easily overlooked. A pair found by this writer nesting in a marsh on the Plains near Boulder June 5, 1910, and July 9, 1911. These are the only county records (and apparently the second and third nesting records for Colorado). (Betts 1913).*

*Near Boulder on 2 July 1979, Horst Droger discovered a nest with five eggs, perched in cattails over water 2 feet deep. A photograph taken on 21 July showed an adult with five young. (Kingery 1998).*

Current Status: Casual Breeder

Recent Observations: A single bird was observed at Walden Ponds on 10 June 2005, and again in August 2005 (Boulder County Audubon Society 1978-2010). These were the first reported observations at Walden and Sawhill ponds since 1997. Least bitterns were reported there seven times between 1981 and 1997 (Boulder County Audubon Society 1978-2010). The Colorado Breeding Bird Atlas (Kingery 1998) reported only two breeding season sightings within the state, including one near Hygiene.

### Great Egret

Habitat: Breeds in cottonwood groves on the plains; also in marshes. Nests are constructed of sticks and placed in shrubs or trees.

Historic Status: Not reported.

Current Status: Rare Breeder

Recent Observations: From 1972 through 2000, a few pairs nested in the large heronry at Boulder Valley Farm, along Boulder Creek east of 95th Street. This heronry was abandoned during the early 2000s, and most of the birds, including the great egrets, appear to have moved to a new heronry in western Weld County south of Union Reservoir (Beason 2009, Janet George). These two heronries are among only three documented Great Egret nesting locations in Colorado (Kingery 1998).

### Peregrine Falcon

Habitat: Nests on cliffs, particularly in the foothills. Nests are scraped into debris on rock ledges. Sites are similar to those occupied by Prairie Falcons.

Historic Status: Rare Breeder.

*There are two specimens in the cabinets at the State Capitol labeled "Longmont," one taken on September 11, 1898, by Harry Holland, the other by B. Hayward. Gale observed a pair at their nesting site just north of the county, April 2, 1889. (Betts 1913).*

*The only other published reference seems to be that of French (1951), who visited a eyrie on the third "Flatiron," a prominent rock formation near Boulder. The nest was on a ledge 60 feet from the ground, and on April 26, 1950 contained four eggs. Three of the young were hatched in early June, and were banded. It is interesting that a nest of Prairie Falcons was on a ledge about 200 yards away, and apparently there was no conflict between the species. The Peregrines continued to use this eyrie although subjected to interference, until late June 1958 when, unfortunately, an inexperienced would-be falconer removed two of the three full-grown young on the ledge, the third taking flight. The birds were placed in a haversack where they were smothered. Fortunately, Dr. Robert Stabler heard of the event and the specimens were sent to this Museum. (Bailey and Niedrach 1965).*

Current Status: Rare Breeder

Recent Observations: Peregrines returned to the Flatirons to nest in 1991, and since then 1-3 pairs have nested annually, fledging 2-8 young (Lederer 2010). Peregrines also have nested since 1991 in South St. Vrain Canyon and on Steamboat Mountain (Lederer 2010).

## **Short-eared Owl**

Habitat: Winters on the plains in freshwater marshes, grasslands, and agricultural areas.

Historic Status: Rare Winter Visitor.

*One in University collection taken by Bragg in Boulder in 1903. Noted by Rockwell near Niwot on March 26, 1904, and at Longmont, December 30, 1906. (Henderson 1909).*

*Winter resident; common in the meadows on the Plains. Arrives September 15-November 20 (2 records); leaves February 22-March 31 (3 records). (Betts 1913).*

*Six near Broomfield, Boulder County, November 11, 1958, by Jack Putnam. (Bailey and Niedrach 1965).*

Current Status: Rare Winter Visitor

Recent Observations: From 1979-2009, Individuals were reported in November, December, January, or February at Boulder Reservoir (9 years), Union Reservoir (2 years), Lagerman Reservoir (3 years), Marshall Mesa (1 year), Coal Creek south of Boulder (1 year), Broomfield (1 year), Lefthand Valley near Table Mountain (1 year), and Hygiene (1 year; Boulder County Audubon Society 1978-2010).

## **Black Swift**

Habitat: Mountain cliffs near waterfalls or dripping caves. Cone-shaped nests are constructed of grass, mud, moss, and twigs, and placed in a cave or on a ledge near a moist area.

Historic Status: Hypothetical Breeder

*Gale includes this in his manuscript of Boulder County birds, but nowhere in his notes mentions ever taking it or actually seeing it. Therefore, as it is a species of southwestern Colorado, the record cannot be safely accepted without further information. (Henderson 1909).*

*Gale lists this species for the region but without data. Widman includes it in his list of birds seen at Estes Park (just north of the county) in the summer of 1910. (Betts 1913).*

Current Status: Rare Breeder.

Recent Observations: Mike Figgs and Nan Lederer reported nesting at three Boulder County locations during the early 1990s: Ouzel Falls, Columbine Falls, and Diamond Lake Falls.

## **Bank Swallow**

Habitat: Colonial breeder, generally on the plains, along banks of washes, streams, ponds, and lakes. Nests are placed in tunnels and constructed of grass, small sticks, and feathers.

Historic Status: Rare Breeder.

*Summer resident; common locally on the Plains. Arrives, April 24 (1 record, Gale). The writer observed a colony nest-building on May 19, 1912, and incubating June 12, 1910. Birds were still at their nesting-sites, July 27 and August 13 (the latest date seen). (Betts 1913).*

*Rare Summer resident - locally common on the plains. (Alexander 1937).*

Recent Observations: Colonies of Bank Swallows (10-25 pairs) nested at Walden Ponds Wildlife Area from 2007-09 and at Valmont Reservoir from 2004-05 (Boulder County Nature Association 2010).

## **Veery**

Habitat: Breeds in foothills and mountain riparian habitat, including montane willow carrs. Nests are placed in shrubs and the lower portions of trees and are constructed of grasses and mosses and lined with finer material.

Historic Status: Casual Breeder.

*The only record for the county is that of a nest taken by Gale, June 13, 1884, near Gold Hill; later in his notes, however, he describes the same nest as being that of a Wood Thrush. Widman saw several of the species near Long's Peak Inn, 9000 feet (only a short distance north of the county line), in July 1910, and Dean Babcock informed the writer that they*

*were frequently seen there in the summer of 1912. It has probably been overlooked in the county, though it does not appear to be common in Colorado.* (Betts 1913).

*Status uncertain, probably a regular summer resident in the mountains. The only record is of a nest near Gold Hill, June 13, 1884. There seems no ground for Betts' statement that Gale referred to this as a Wood Thrush's nest.* (Alexander 1937).

*The only other record is a nest taken by Gale in Boulder County, on June 13, 1884. It was in a low evergreen about three feet from the ground in a shady, wooded canyon near Gold Hill, and was composed of weeds, mosses and grasses, lined with finer material. There were four light blue eggs.* (Bailey and Niedrach 1965).

Current Status: Rare Breeder.

Recent Observations: Veeries are observed irregularly on the Indian Peaks breeding bird count (1985-87, 1991, 1994-96, 2002, and 2004) in montane willow carrs, but there has been no documentation of nesting (Hallock 2010). The most consistent locations for observation have been Arapaho Ranch, Tucker Homestead, and Caribou Ranch.

## **Northern Mockingbird**

Habitat: Breeds in a variety of habitats including plains riparian woodlands, plains and foothills shrublands, and agricultural areas. Nests are constructed of twigs, grasses, and rootlets and placed in shrubs or the lower portion of trees.

Historic Status: Rare Breeder.

*Summer resident; rare on the Plains. Gale found a few nests, May 31, 1886, and June 1-10, 1887.* (Betts 1913).

*Rare Summer resident on the plains, probably more common formerly. Seen by the writer July 11, 1927, at Valmont Butte; and May 19, 1933, near Baseline Reservoir. In the former case the pair seen seemed to be nesting.* (Alexander 1937).

Current Status: Casual Breeder.

Recent Observations: Scott Severs reported nesting along Coal Creek east of State Highway 93 in 1987. Boulder County Parks and Open Space wildlife biologist Susan Spaulding reported an occupied nest at Rock Creek Farm in 2008. Some observers feel that Northern Mockingbird should be listed as a decliner because it was a very regular rare breeder in the county, whereas now it is an irregular breeder. Statewide, fewer are being found near Front Range cities (Kingery 1998).

## **Sage Thrasher**

Habitat: Breeds in foothills shrublands. Nest is bulky and made of coarse twigs, grass and forbs, and lined with fine material. The nest is placed on the ground or low in a shrub.



Historic Status: Uncommon/Rare Breeder

*Summer resident; rare along the base of the foothills; rather common in fall migration on the Plains. Though no nests have been taken in the county, the writer observed them in July (9-21) in 1910, 1911 and 1912. Gale found eggs between April 28 and June 27. The writer saw young in the nest at 8500 feet, July 28. (Betts 1913).*

*Infrequent summer resident, chiefly along the foothills. (Alexander 1937).*

*Pair, male in song imitating Western Meadowlark, in hills west of Lyons July 9, 1960 noted by Hugh Kingery. (Bailey and Niedrach 1965).*

Current Status: Rare Breeder.

Recent Observations: Nesting was reported during 1987 along Coal Creek near State Highway 93 (Jeff Bachant) and during the 1990s at Hall Ranch west of Lyons (Dave Hallock). The Hall Ranch location was the approximate area where Hugh Kingery heard Sage Thrashers singing in 1960. No nests were reported during the 2000s, but singing males were observed in June at Niwot Mountain (2004 and 2006), Bald Mountain (2001-4 and 2006), and Caribou Flats (2001; Boulder County Nature Association 2010).

## **American Redstart**

Habitat: Breeds in plains riparian habitat and in deciduous and coniferous woodlands near water. Nests are cup-shaped, made of plant fibers, grass, and rootlets, and placed in the fork of a low tree or shrub.

Historic Status: Uncommon/Rare Breeder.

*Fairly common transient and infrequent summer resident along streams of plains. Nested on University campus (along Boulder Creek) in 1927. (Alexander 1937).*

*This species has nested irregularly in the Boulder-Longmont area on at least six occasions - near Longmont in 1925, on the University campus at Boulder in 1927, near Loveland for three successive year starting with 1930, and finally, a nest found by Niedrach June 5, 1943 - again on the campus at Boulder. (Bailey and Niedrach 1965).*

Current Status: Rare Breeder

Recent Observations: Kingery (1998) reported probable breeding near Lyons and Eldorado Springs, but we've received no documentation of nesting since we began compiling this list in 1982. Boulder County Wildlife Inventory (Boulder County Audubon Society 1978-2010) volunteers reported singing males in the foothills during June of 1989, 1991, 1992, 1998, 2004, and 2009; and July of 1997 and 2000.

## Ovenbird

Habitat: Breeds in ponderosa pine woodlands or mixed conifer forests of pine and Douglas-fir containing shrub (often Gambel oak) understories. Nests are placed on the ground and constructed of dried grass, leaves, moss, and other vegetative matter.

Historic Status: Hypothetical Breeder.

*Minot believed he heard the notes of this species at Boulder and Nederland in 1880. (Betts 1913).*

Current Status: Hypothetical Breeder.

Recent Observations: This species has never been confirmed breeding in Boulder County, but it makes the list because of its presence over a long period of time and because of our proximity to well-documented breeding areas in northern Douglas and Jefferson counties (Kingery 1998, Henwood 2009, Jones 2009). Gambel oak appears to be an important component of nesting habitat in these areas, and its absence in Boulder County may limit nesting opportunities. Singing males were reported in the foothills of Boulder County in June in 1989, 1999, 2003-06, and 2009; and in July in 1999, 2003-06, and 2009 (Boulder County Audubon Society 1978-2010).

## **BCNA Category 4: Isolated or Restricted Populations**

### **American Bittern**

Habitat: Breeds in marshes. Nests are constructed from marsh vegetation placed in a platform on the ground, on mud, or occasionally over water.

Historic Status: Fairly Common Breeder.

*Summer resident; common in the marshes of the Plains zone. Full-grown young observed July 27, 1912. (Betts 1913).*

*Infrequent to common summer resident on plains, April to September (Alexander 1937).*

Current Status: Uncommon Summer Resident.

Recent Observations: From 2001-10, American Bitterns nested in cattail marshes at South Boulder Creek State Natural Area, Ertl Ponds near White Rocks, Walden Ponds, Sawhill Ponds, Coot Lake, Six-Mile Reservoir, and Boulder Reservoir (Boulder County Nature Association 2010, Jones 2010). Populations appear to be stable or increasing.

### **Osprey**

Habitat: May have nested historically in montane willow carrs, though there is no documentation. Have nested recently on artificial nest platforms, telephone poles, and transmission poles surrounding prairie reservoirs.

Historic Status: Rare Non-Breeder. Not reported by Henderson (1909). Described as a "rare or in frequent transient" by Alexander (1937).

*"One was seen on the Plains by the writer, April 21, 1912. Reported as not uncommon during migration at the Barr Lake. (Betts 1913).*

Current Status: Uncommon to Fairly Common Breeder on plains.

Recent Observations: From 2001-10, Ospreys nested at 12 or more known locations on the plains and at least 2 locations in the mountains (Boulder County Nature Association 2010). From 2006-10 there were 3 nests annually at Boulder Reservoir, alone (Jones 2000 and). Nesting was first documented in Boulder County in 2001 (Boulder County Nature Association 2010). Nesting populations are increasing.

### **Bald Eagle**

Habitat: Large cottonwoods in protected riparian woodlands on the plains. All documented Boulder County nests have been in areas that are protected from human intrusion, including recreation.

Historic Status: Rare Non-Breeder.

*Migrant; rare; recorded from Plains and Yellow Pine zones. Henderson records one seen by himself and one seen by Blanchard. The writer saw two December 5, 1909, and one March 17, 1912. (Betts 1913).*

*Rare transient (Alexander 1937).*

Current Status: Uncommon Breeder on Plains.

Recent Observations: The first documented Bald Eagle nest in Boulder County was observed along Boulder Creek near White Rocks in 2002. Five pairs nested in 2008-10, at White Rocks, Coal Creek south of Boulder, Panama Reservoir, St. Vrain Creek west of County Line Road, and St. Vrain Creek west of McCall Lake (Boulder County Nature Association 2010). Nesting populations are steady or increasing.

## **Northern Goshawk**

Habitat: Nests in aspen groves and open conifer forests in the mountains and foothills (Kingery 1998).

Historic Status: Rare to Uncommon Breeder.

*Visitant; probably rare. H. G. Smith saw one in the taxidermist's shop killed at Sugarloaf (Yellow Pine zone), February 21, 1888. One was reported by Sprague in his notes many years ago (Henderson). Two were killed in 1908, one of which is in the University collection (Henderson). One was seen by Mr. and Mrs. McHarg near Boulder, December 26, 1912. (Betts 1913).*

Current Status: Uncommon Breeder in mountains and foothills.

Recent Observations: Since 1990 Northern Goshawks have been documented nesting in Lost Gulch, at Heil Valley Ranch, Rainbow Lakes Road, Camp St. Malo, Burnt Mountain, Pine Valley subdivision, Peck Gulch, Rogers and Reynolds Ranch Open Space, and Caribou Ranch (Boulder County Nature Association 2010). Little is known about their population status locally.

## **Golden Eagle**

Habitat: Nests on cliff faces and occasionally in large conifers in the foothills and mountains, from 6000-11,000'.

Historic Status: Uncommon Breeder.

*Occasionally reaches the Plains zone but most frequently reported from the Yellow Pine. Gale took several sets of eggs between March 21 and April 11. A pair nested on the cliffs at Left Hand Creek in 1912 (Betts 1913).*

*Rare or infrequent resident, most records from the foothills (Alexander 1937).*

Current Status: Uncommon to Fairly Common Breeder.

Recent Observations: From 2001-10, 17 nesting territories were reported active in Boulder County (Lederer 2010, Christian Nunes). Many of these territories were first reported by Denis Gale in the 1880s and Malcolm Jollie in 1945, so it's likely that local nesting populations are stable and near or at capacity. Though they nest in the foothills and mountains, Golden Eagles often hunt large rodents (especially cottontails and prairie dogs) on the plains.

## **Prairie Falcon**

Habitat: Nests on ledges on cliff faces in the foothills and occasionally higher mountains. Hunts birds and rodents in open areas on the plains.

Historic Status: Rare to Uncommon Breeder.

*Summer resident; probably infrequent. Gale twice found in nesting along the St. Vrain, apparently in the Yellow Pine zone (May 4, 1893); May 7, 1899), and took four eggs from a nest on the Little Thompson...Blanchard reported one from the county (Henderson). Kellogg took one above timberline near Estes Park. (Betts 1913).*

*Infrequent summer resident, probably present in winter also. (Alexander 1937).*

Recent Observations: From 2001-10, pairs nested in at least 10 locations, primarily on cliff faces in the lower foothills (Lederer 2010). In the Boulder Mountain Park, pairs nested at Eldorado Mountain, Shadow Canyon, Fern Canyon, Bear Canyon, Bluebell Canyon (Third Flatiron), the Amphitheater, and Mt. Sanitas. Nesting populations appear to be stable, though elimination and fragmentation of prairie foraging habitat could threaten long-term nesting success.

## **Burrowing Owl**

Habitat: Breeds in grasslands, especially prairie dog colonies. Nests are made in mammal burrows generally lined with ungulate dung, dry grass, weeds and feathers.

Historic Status: Common Breeder.

*Our most abundant owl on the plains, perhaps less common in winter. (Henderson 1909).*

*Summer resident; common on the Plains. Gale was informed of their presence as early as March 10; October 13 is the latest date noted by the writer. Fresh eggs were found by Gale on May 10 near Valmont (three nests running from 20 to 30 inches in depth below the surface and having burrows about six feet long). He also found young just hatched on June 10. (Betts 1913).*

*Once exceedingly common birds, Burrowing Owls have vanished from many areas of the state, their disappearance coinciding with the poisoning of prairie dogs. (Bailey and Nie-drach 1965).*

Current Status: Rare to Uncommon Breeder.

Recent Observations: Burrowing Owls appear to have nearly disappeared from Boulder County during the 1990s, when successful nests were reported only at Carolyn Holmberg Open Space Preserve west of Broomfield (Jones and Mahoney 2003). Since then, a number of new nesting sites have been discovered, and a total of 10 pairs were documented nesting within the county in 2010 (Boulder County Nature Association 2010). However, nest productivity is very low, and Boulder County may be a "habitat sink" for this grassland-nesting owl. Fragmentation of nesting habitat and predation by urban-adapted predators are probable causes of low nest productivity (Jones and Mahoney 2003).

## **Grasshopper Sparrow**

Habitat: Mixed-grass prairies on the plains. Nests are constructed among concealing grasses on the ground, and shrubs and fenceposts are used for singing (Kingery 1998).

Historic Status: Rare Breeder.

*Not mentioned by Betts (1913). Described as a rare or infrequent summer resident on the plains by Alexander (1937).*

Current Status: Uncommon to Fairly Common Breeder.

Recent Observations: Since 2000, nesting has been confirmed in a variety of grassland areas on the plains, including Coal Creek riparian restoration area, Doudy Draw, Boulder Valley Ranch, and South Boulder Creek State Natural Area (Jones, Andes-Georges, and Hansley 2010, Heather Swanson). Numbers observed vary dramatically from year to year (Boulder County Audubon Society 1978-2010), and Grasshopper Sparrows appear to abandon local nesting areas during drought years (Jones, Andes-Georges, and Hansley 2010).

## **Bobolink**

Habitat: Nests in irrigated hay meadows and occasionally in native tallgrass prairie, primarily in floodplains of South Boulder Creek and St. Vrain Creek (Kingery 1998).

Historic Status: Isolated Breeder.

*Summer resident; local in the bottomlands on the Plains near Boulder. Arrives, May 24-28 (5 records); latest fall date September 9. Henderson first noticed it in the county in 1904. There seems to be no reason to doubt that it nests, though eggs have not been taken. (Betts 1913).*

*Rare or infrequent summer resident. Observed by the writer June 24, 1927. Several recent records in May 1931 and '32 (Mrs. J. Henderson), and 1936. (Alexander 1937).*

Current Status: Uncommon and Isolated Breeder.

Recent Observations: Thorough hay meadow inventories conducted by Boulder Open Space and Mountain Parks confirmed that Bobolinks nest in several dozen locations within the South Boulder Creek and Boulder Creek floodplains. In 2008 volunteers counted 253 individuals on Boulder Open Space and Mountain Parks properties (Boulder Open Space and Mountain

Parks 2010). Pairs also nest on Boulder County open space and private lands in the St. Vrain Creek floodplain between Lyons and Longmont. The majority of nesting sites are in irrigated hay meadows, and it is still not known whether this species nested in Boulder County prior to European settlement.

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Jeff Bachant, Boulder County Nature Association

Bill Eeds, Boulder County Audubon, Boulder Wild Bird Center

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Dave Hallock, Boulder County Nature Association

Greg Hayes, DVM, Arapahoe Animal Hospital, Boulder, Colorado

Stephen Jones, Boulder County Nature Association, Boulder County Audubon

Hugh Kingery, Colorado Breeding Bird Atlas, Audubon Society of Greater Denver

Nan Lederer, LREP Inc., Boulder County Nature Association

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Christian Nunes, Boulder Open Space and Mountain Parks

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Susan Spaulding, Boulder County Parks and Open Space

Heather Swanson, Boulder Open Space and Mountain Parks



**Burrowing Owl**



**Mountain Plover**



**Lewis's Woodpecker**



**Sharp-tailed Grouse**

Photos by Stephen Jones