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Cover Photograph: White-faced Ibis at Hart's Basin, Colorado by William Schuster of Delta Colorado.

Pen and Ink Sketch by Ellen Klaver of Boulder, Colorado.

LETTERS TO THE EDITOR

Red-backed Hawk

I must agree with both the identification and conclusion that the Buteo in question ("Some Thoughts on the Identification of Gunnison's Red-backed Hawk" Vol. 22, pp. 9-14) probably did not get to Gunnison on its own power. I do have problems however with claims that this bird is incapable of migration of any kind, let alone long-distance migration. In A Guide to Birds of Columbia by Hilty and Brown, a reference cited, it is suggested that this bird is an austral migrant to Columbia as most records are in the austral winter and there are no breeding records.

As a northern migrant myself to Chile, where the bird is rather common, this species clearly moves around. It is true that it is common in winter near Punta Arenas, Chile. However, Clauydio Venegas in Guia de Campo Para Las Aves de Magallanes states that there is migration from south to north as well as altitudinal migration. More to the point, this species has colonized the Juan Fernandez Islands which are located in the Pacific Ocean over four hundred miles west of central Chile. The winds in this area are strong and from the south suggesting that the original colonizers traveled many times this distance to reach landfall. In any case, migration is increasingly realized to take place in many South American species previously believed to be resident and with small home ranges.

David Galinat
Olathe, Colorado

BREEDING BIRDS OF AN OLD-GROWTH SPRUCE-FIR FOREST

Dave Hallock
Boulder County Nature Association
Boulder, CO

INTRODUCTION

Interest in the wildlife values of old-growth forests has been increasing. Old-growth forests are characterized by uneven-aged stands, large diameter trees, all sizes of snags, and large amounts of deadfall (Franklin et al. 1981). Generally, the stands have been undisturbed for several hundred years and are often considered climax forests. Studies of avifauna in old-growth and climax forests have shown high species diversity (Balda 1975, Wiens 1975, Bull et al. 1980, Verner 1975, 1980). There has been an expressed need for more research in old-growth forests (Mannan 1980, The Wildlife Society 1987).

The objectives of this study were to obtain information on the breeding bird community of old-growth spruce-fir forests in the Front Range of Colorado and to compare the results with other studies of similar habitats in western North America.

METHODS

Study Area

The study was conducted in 1987 in the Indian Peaks Wilderness Area, Roosevelt National Forest (Boulder Ranger District), Colorado. The site is located in the northern Front Range, 32 km (20 miles) west of Boulder and 10 km (6 miles) west of Nederland, near Chittenden Mountain.

A 15 ha (37 acre) plot, measuring 300 m (984 ft.) by 500 m (1639 ft.), was placed within a stand of subalpine forest. Elevation of the plot ranged from 3257 m (10,680 ft.) to 3306 m (10,840 ft.). A 25 m (82 ft.) grid was flagged within the plot. East and west edges were similar forest; the north edge was meadow and willow (*Salix* spp.) shrub wetland, while the south edge was an early successional forest resulting from a burn occurring around 1900.

The climax vegetation of the area is forest dominated by Engelmann spruce (*Picea engelmannii*) and subalpine fir (*Abies lasiocarpa*) (Marr 1961, Whipple and Dix 1979, Peet 1981).

Vegetation Measurements

Fifteen points were randomly chosen for the location of 10 m x 10 m (33 ft. x 33 ft.) vegetation sampling stations. Within each station all trees over 1 m (3 ft.) tall were counted and recorded by species and size class based on diameter-at-breast-height (dbh). Snags were also classified by dbh size class. Stem counts were made of all shrubs and measurements made of height and area. Estimates were made of maximum stand height, canopy cover, and ground cover.

Bird Census

Breeding birds were censused by the territory mapping method (Williams 1936) as standardized by the International Bird Census Committee (1970). Ten censuses were conducted from May 24 through July 28, all occurring between dawn and 1115 in the morning. All species were enumerated on the basis of territorial males except for the Brown-headed Cowbird which had a female present in the plot throughout the census period. Partial territories for birds near the plot edge were based on the proportion of sightings within and outside the study site.

RESULTS AND DISCUSSION

Vegetation

The size class information presented in Table 1 indicates a forest consisting of the two subalpine tree species and a diameter size distribution with many small trees, a few large ones and all sizes in between. The diameter distribution is typically called reverse-J and is considered to be near the steady-state condition (Leak 1965, Peet 1981). The remains of the initial bell-shaped post-disturbance forest were present in the 30-39 cm (12-15 in.) range. Total basal area of living trees was 50.4 m²/ha (219 sq. ft./acre) and of dead trees 16.3 m²/ha (71 sq. ft./acre). Dead fall averaged 600 trees/ha (243/acre). The shrub understory, dominated by currant (*Ribes* spp.) and willow, measured 2,361 stems/ha (956/acre). Ground cover was dominated by myrtle blueberry (*Vaccinium myrtilus*). Canopy cover was 38% and canopy height averaged 19 m (62 ft.).

Breeding Birds

Twenty-one breeding species were found at Chittenden Mountain (Table 2). The avifauna was numerically dominated by foliage foraging types followed in decreasing order by ground foragers, timber foragers and aerial feeders (Table 3). Generally, this matches descriptions of avian communities in coniferous forests (Wiens 1975), western coniferous old-growth forests (Mannan 1980) and spruce-fir forests (Smith 1980). The number of breeding species and breeding bird density was within reported ranges from studies of spruce-fir and old-growth forests throughout western North America (Mannan 1980, Smith 1980).

Four breeding bird studies conducted in spruce-fir forests were compared with the Chittenden site (Table 2). All sites were located within 161 km (100 miles) of Chittenden Mountain. The studies by Keller (1987) and Scott et al. (1982) were in forests exhibiting the characteristics of old-growth. The studies by Snyder (1950) and Alles (1985) were in spruce-fir stands with few large trees, few snags, and higher tree densities--more representative of mature forests yet to develop into the old-growth lifestage (Peet 1981).

All five studies demonstrate the findings of Wiens (1975), Mannan (1980), and Smith (1980). Foliage gleaning insectivores averaged 56% of the breeding bird community while ground feeders comprised almost 30% (Table 3). Mountain Chickadee, Hermit Thrush, Ruby-crowned Kinglet, Yellow-rumped Warbler, Dark-eyed Junco, and Pine Grosbeak were the only species found in all five studies, and averaged 70% of total individuals.

Smith (1980) felt that a distinguishing feature of western spruce-fir forests was the high number of Corvidae and Fringillidae due to large and frequent cone crops. Foliage seed eaters in the five studies in Table 2 averaged only 6% of the reported number of breeding individuals. It is probable that this foraging group is being undercounted. Gray Jays and Clark's Nutcrackers have often completed nesting by the end of May while Red Crossbills may nest in any month (Bailey and Niedrach 1965). None of the five studies began before the last week of May. Keller (1987) reported a significant number of Gray Jays. However, this was based on species presence and not territorial males.

Nesting guild information for the five studies indicates that over half of the breeding individuals nest in trees

(excluding cavities) while almost one third nest near or on the ground (Table 4). Cavity-nesters averaged 17% of the breeding avifauna for all 5 studies and 20% for the old-growth stands.

Based on the number of snags present in the old-growth, one might expect higher utilization of these forests by cavity-nesting birds. Scott et al. (1980) found that cavity-nesting birds usually accounted for 30 to 45 percent of the bird population in forests of western North America while an average of 30 percent cavity-nesters was found in 11 selected old-growth coniferous forests discussed by Mannan (1980). Haapanen (1965, 1966) reported that only the Three-toed Woodpecker can excavate holes in living spruce trees and concluded that cavity-nesters decreased as the amount of spruce increased.

A comparison of the breeding bird communities of the old-growth forest studies with the mature forest studies suggests some interesting distinctions. Verner (1980) states that bird species richness tends to increase with increasing horizontal heterogeneity of the vegetation (patchiness). Valiela (1971) felt that feeding specialization increased with habitat succession. The differences between the old-growth and mature studies tend to support these statements.

Old-growth or climax spruce-fir forests are complex mosaics of various seral stages containing patches of closed canopy forest and open forest (Peet 1981). The forests contain closed canopy avian species that are also present in mature forests such as Ruby-crowned Kinglet and Hermit Thrush, as well as open forest, early successional, and edge species such as Am. Robin, Cassin's Finch, and Olive-sided Flycatcher (Taylor and Barmore 1980, Varner 1980, Keller 1987).

Old-growth forests have more large diameter trees than mature forests. Keller (1987) found a positive relationship between the occurrences of Brown Creeper and Red-breasted Nuthatch with the density of large live trees. Franzreb (1985) documented the use of large trees by Brown Creepers for foraging. The same foraging specialization may be true for Red-breasted Nuthatches (Keller 1987). Habitat specialization is also characteristic of the Three-toed Woodpecker (Bent 1964, Koplín 1969).

SUMMARY

A breeding bird census was conducted in an old-growth

spruce-fir forest in the Front Range of Colorado. The results were compared with four other studies of the forest type--two with climax forest characteristics and two with characteristics of mature forests. The breeding avifauna of spruce-fir forests is dominated by tree foliage and ground feeders and nesters. Cavity-nesters comprise a surprisingly small portion of nesting birds. Important differences exist between old-growth and mature forest avian communities. Old-growth forests exhibited a more complex breeding bird community that included early and late seral stage species as well as habitat specialists.

ACKNOWLEDGEMENTS

This study was financially supported by the Colorado Audubon Council, Boulder Audubon Society, and Boulder County Nature Association. Thanks to Mike Figs and Nancy Lederer for help in laying out the study area, and Pam Leland for typing. Constructive comments on this paper were provided by Dr. Carl E. Bock.

Table 1
Tree Composition by Size Class of Chittenden Mountain Old-Growth Forest

Species	Size Class (dbh)							
	Seedlings ¹	Saplings ²	10-19cm 4-7"	20-29cm 8-11"	30-39cm 12-15"	40-49cm 16-19"	50-59cm 20-23"	60cm+ 24" +
Engelmann Spruce (trees/ha)	367	173	120	87	127	66	14	7
Subalpine Fir (trees/ha)	1427	980	527	133	20			
Total (trees/ha)	1794	1153	647	220	147	66	14	7
Snags (trees/ha)	--	--	94	54	73	20	13	

1. Less than 1 m (3 ft.) high

2. Greater than 1 m (3 ft.) high, less than 10 m (4 in.) dbh

Table 2
Breeding Bird Species and Density
in 5 Censuses of Spruce-Fir Forests

Species	Density/km ²				
	Old Growth Forests			Mature Forests	
	Chittenden ⁽¹⁾	Keller ⁽²⁾	Scott et al. ⁽¹⁾	Alles ⁽¹⁾	Snyder ⁽¹⁾
Blue Grouse			1	10	10
Broad-tailed Hummingbird			1	10	
Williamson's Sapsucker			11		
Hairy Woodpecker	7		7		17
Three-toed Woodpecker	1	6	1		
Northern Flicker	3		3		1
Olive-sided Flycatcher	7		1		
Hammond's Flycatcher				10	
Western Flycatcher	7		17		
Gray Jay		26			
Clark's Nutcracker					1
Mountain Chickadee	33	73	59	10	30
Red-breasted Nuthatch	7	10	5		
Brown Creeper	13	3	1		
Golden-crowned Kinglet	13	3	2		
Ruby-crowned Kinglet	100	39	89	40	70
Townsend's Solitaire			17		1
Hermit Thrush	33	15	34	10	20
American Robin	27	33	11		
Yellow-rumped Warbler	77	51	79	30	15
Wilson's Warbler	7				
Western Tanager		1			
Lincoln's Sparrow	7		1		
White-crowned Sparrow	7				
Dark-eyed Junco	33	85	69	40	1
Brown-headed Cowbird	7				
Pine Grosbeak	13	24	1	10	10
Cassin's Finch	7	1			
Red Crossbill					1
Pine Siskin	7	15	1		62
Total Density	414	385	407	170	240
Total Species	21	15	18	9	13

(1) Chittenden (this study), Scott et al. (1982), Alles (1985) and Snyder (1950) used territory-mapping census method. Numbers represent pairs/km². Scott et al. was conducted for four years--numbers are averages.

(2) Keller (1987) used variable circular plot census method. Numbers represent individuals/km².

Table 3
Foraging Guilds⁽¹⁾
(% of Total Population)

Guild	Chittenden	Keller	Scott et al.	Alles	Snyder	Average
Foliage Insect	56	47	56	47	75	56
Foliage Seed	5	13	0	6	4	6
Ground	28	35	33	35	13	29
Timber	7	5	6	0	7	5
Aerial	3	0	4	6	0	3

(1) Modified from Salt (1957)

Table 4
Nesting Guilds⁽¹⁾
(% of Total Population)

Guild	Chittenden	Keller	Scott et al.	Alles	Snyder	Average
Ground/Brush	28	35	28	41	13	29
Tree	57	41	51	53	67	54
Cavity	15	24	21	6	20	17

(1) Modified from Mannan (1977)

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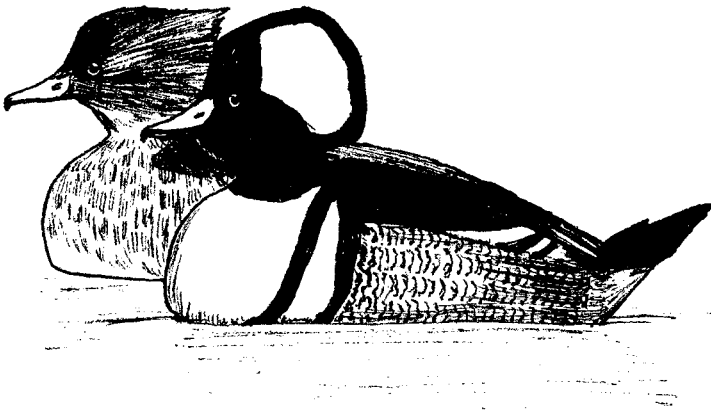
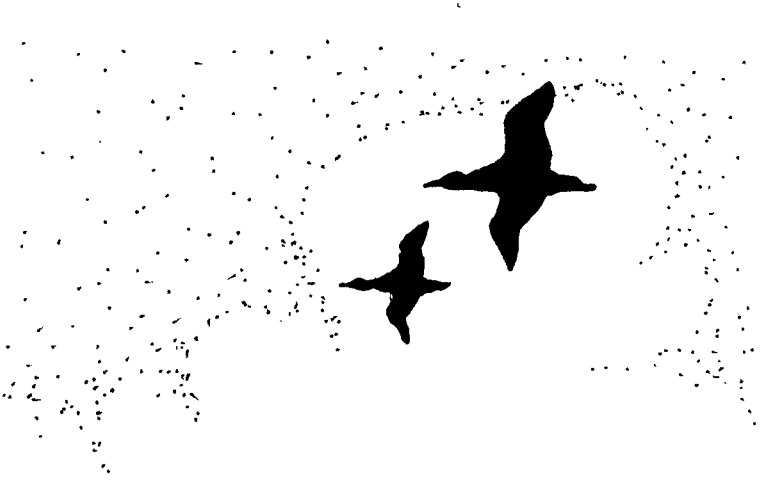
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COMMON AND SCIENTIFIC NAMES OF BIRDS CITED IN TEXT*

<u>Common Name</u>	<u>Scientific Name</u>
Blue Grouse	<u>Dendragapus obscurus</u>
Broad-tailed Hummingbird	<u>Selasphorus platycercus</u>
Williamson's Sapsucker	<u>Sphyrapicus thyroideus</u>
Hairy Woodpecker	<u>Picoides villosus</u>
Three-toed Woodpecker	<u>Picoides tridactylus</u>
Northern Flicker	<u>Colaptes auratus</u>
Olive-sided Flycatcher	<u>Contopus borealis</u>
Hammond's Flycatcher	<u>Empidonax hammondi</u>
Western Flycatcher	<u>Empidonax difficilis</u>
Gray Jay	<u>Perisoreus canadensis</u>
Clark's Nutcracker	<u>Nucifraga columbiana</u>
Mountain Chickadee	<u>Parus gambeli</u>
Red-breasted Nuthatch	<u>Sitta canadensis</u>
Brown Creeper	<u>Certhia americana</u>
Golden-crowned Kinglet	<u>Regulus satrapa</u>
Ruby-crowned Kinglet	<u>Regulus calendula</u>
Townsend's Solitaire	<u>Myadestes townsendi</u>
Hermit Thrush	<u>Catharus guttatus</u>
American Robin	<u>Turdus migratorius</u>
Yellow-rumped Warbler	<u>Dendroica coronata</u>
Wilson's Warbler	<u>Wilsonia pusilla</u>
Western Tanager	<u>Piranga ludoviciana</u>
Lincoln's Sparrow	<u>Melospiza lincolni</u>
White-crowned Sparrow	<u>Zonotrichia leucophrys</u>
Dark-eyed Junco	<u>Junco hyemalis</u>
Brown-headed Cowbird	<u>Malothrus ater</u>
Pine Grosbeak	<u>Pinicola enucleator</u>
Cassin's Finch	<u>Carpodacus cassinii</u>
Red Crossbill	<u>Loxia curvirostra</u>
Pine Siskin	<u>Carduelis pinus</u>

*Common and scientific names follow 1983 A.O.U. Checklist.



Hooded Merganser

PROCEEDINGS OF THE 1988 26th ANNUAL CONVENTION
OF THE COLORADO FIELD ORNITHOLOGISTS

Peter Gent
55 S. 35th Street
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The 26th Annual Convention of the Colorado Field Ornithologists was held at the Lamar Community College and in southeastern Colorado over Memorial Day weekend, May 28-30, 1988. Over 40 people attended the convention and most assembled at the Lamar Community College on Friday evening. There were two field trips on the following morning. The first went to the area below Two Buttes Reservoir dam and did a considerable amount of work for the Colorado Breeding Bird Atlas priority block there. The second field trip went to Nee So Pah Reservoir where nearly 20 Snowy Plovers were found as well as a Hudsonian Godwit in full breeding plumage. Both trips ended back in the Lamar City Park where many of us watched about ten pairs of Mississippi Kites while we ate lunch.

The paper session was held on Saturday afternoon. The papers and speakers were:

STATUS OF LESSER PRAIRIE-CHICKENS IN COLORADO

Kenneth M. Giesen, Colorado Division of Wildlife, Fort Collins

Abstract: Little is known about population size and distribution of Lesser Prairie-Chickens (Tympanuchus pallidicinctus) in Colorado prior to settlement. They apparently inhabited parts of 11 counties in southeast Colorado at one time but populations declined rapidly following settlement because of habitat changes due to livestock grazing and conversion of native rangelands to cropland. Populations of Lesser Prairie-Chickens reached their nadir following the severe droughts of the 1930's but recovered after federal programs were established to stabilize fragile soils and revegetate the grasslands. Highest densities of Lesser Prairie-Chicken now occur on the Comanche National Grasslands in Baca County with smaller populations inhabiting private rangeland in Prowers and Kiowa counties. Division of Wildlife surveys since 1959

indicate steadily increasing populations which is likely the result of favorable weather and continuing recovery of rangelands.

COLORADO BREEDING BIRD ATLAS UPDATE

Hugh Kingery, 869 Milwaukee St., Denver, CO 80206

(See C.F.O. Journal Vol. 22, No. 1, pp. 2-4).

COLORADO DIVISION OF WILDLIFE WATCHABLE WILDLIFE PROGRAM

Jim Dennis, Colorado Division of Wildlife

CHANGES IN AVIAN BREEDING POPULATIONS

IN ROCKY MOUNTAIN NATIONAL PARK

RESULTING FROM THE LAWN LAKE FLOOD OF 1982

Ronald A. Ryder, Department of Fishery & Wildlife Biology
Colorado State University, Fort Collins, CO 80523
Deborah West Bangs, Estes Park Public Schools
Estes Park, CO 80517

Abstract: Breeding populations of birds were censused for 5 years (1983-1987) on a 12 ha. area severely altered by alluvial deposits left by the Lawn Lake Flood of 1982. Birds were censused for 4 years (1984-1987) on an upstream 12 ha. plot not affected by the flood to serve as a control. After a 1-year decline on the treated (flooded) area, birds increased in total breeding pairs and in total species for 3 years, but showed a slight decline during the fifth breeding season. The recovery in numbers was mainly in native sparrows (especially Lincoln Sparrows) nesting in the willows, which showed remarkable recovery and release after the flood. Avian populations on the control area contained more species, fluctuated mildly year to year, but for the last 3 years had fewer total territorial males than did the treated area.

The business meeting followed the paper session in the late afternoon with the election of officers as follows:

President:	Peter Gent, Boulder
Vice President:	Bill Prather, Longmont

Secretary:	Beth Dillon, Fort Collins
Treasurer:	Steve Bouricius, Peaceful Valley
Journal Editor:	Mark Janos, La Junta
Records Comm. Chairman:	Richard Bunn, Colorado Springs
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	Tina Jones, Boulder
	David Martin, Westminster
	Paul Opler, Fort Collins
	John Rawinski, Monte Vista
	David Silverman, Rye

Following the business meeting, the Board of Directors met and approved the following expenditures:

1. \$100 for a watercolor painting of a White-tailed Ptarmigan by Narca Moore-Craig to be presented to Ann Hodgson in recognition of her five years of outstanding effort in editing the C.F.O. Journal.

2. \$100 to the D.F.O. Colorado Bird Report to help in purchase of new equipment.

3. \$176 to the Bart Lake Bird Observatory for photographic film. This donation will be matched by funds from the Colorado Division of Wildlife.

4. It should be noted that in the last two years the C.F.O. has contributed \$1000 to the Colorado Breeding Bird Atlas Project. The board reaffirmed its support for this project and intends to donate more money in its three remaining years.

The convention banquet followed with a slide presentation by C.F.O.'s own David Leatherman. David gave an excellent slide show with pictures taken mainly in Colorado. These included rare as well as common species and ended with challenging quiz slides.

Some people started very early on Sunday morning with a trip to see the Lesser Prairie-Chickens dance on a lake in the Comanche National Grasslands (successful). The remaining people started merely early, and the group split in two and went to the east and west ends of the Cimarron River in Colorado which is all on private property.

At the east end of the river, there were nesting Scissor-tailed Flycatchers and Eastern Bluebirds, while at the west end there were an Eastern Wood-Pewee, a female Hooded Warbler and a male Northern Cardinal. The groups reunited at Carrizo Canyon for lunch and a field trip and then camped in Cottonwood Canyon.

The group left Cottonwood Canyon early on Monday morning and drove to Kim. We then car-pooled and drove to private property southwest of Kim on Mesa de Maya. Vic Zerbi led us to the canyon where Hepatic Tanagers have been found breeding every year since about 1980. There were 34 people on the canyon rim and despite strong winds from the south, everyone succeeded in watching two pairs of Hepatic Tanagers. The group finally went to the nearby property of Jim Dennis to bird before breaking up after lunch.

The convention was a success mainly thanks to Vic Zerbi of Glenwood Springs. His hard work, expert planning and knowledge of the birdlife of southeastern Colorado ensured the success of our convention. It was also a pleasure to welcome a member of the Board of the Kansas Ornithological Society, Scott Seltman (the rare bird alert voice of Kansas), who attended the convention.

The following species were seen on the convention field trips:

Eared Grebe	Northern Bobwhite
Western Grebe	Scaled Quail
Clark's Grebe	American Coot
American White Pelican	Snowy Plover
Double-crested Cormorant	Semipalmated Plover
Great Blue Heron	Killdeer
White-faced Ibis	Mountain Plover
Green-winged Teal	Black-necked Stilt
Mallard	American Avocet
Northern Pintail	Lesser Yellowlegs
Blue-winged Teal	Spotted Sandpiper
Northern Shoveler	Whimbrel
Gadwall	Long-billed Curlew
American Wigeon	Hudsonian Godwit
Turkey Vulture	Marbled Godwit
Mississippi Kite	Sanderling
Northern Harrier	Semipalmated Sandpiper
Cooper's Hawk	Western Sandpiper
Swainson's Hawk	White-rumped Sandpiper
Red-tailed Hawk	Baird's Sandpiper
Ferruginous Hawk	Stilt Sandpiper
Golden Eagle	Wilson's Phalarope
American Kestrel	Franklin's Gull
Prairie Falcon	Ring-billed Gull
Lesser Prairie-Chicken	California Gull
Wild Turkey	Forster's Tern

Black Tern	American Robin
Mourning Dove	Gray Catbird
Yellow-billed Cuckoo	Northern Mockingbird
Greater Roadrunner	Brown Thrasher
Common Barn-Owl	Curve-billed Thrasher
Western Screech-Owl	Loggerhead Shrike
Great Horned Owl	Warbling Vireo
Burrowing Owl	Red-eyed Vireo
Lesser Nighthawk (Spec.)	Virginia's Warbler
Common Nighthawk	Yellow Warbler
Chimney Swift	American Redstart
White-throated Swift	MacGillivray's Warbler
Black-chinned Hummingbird	Common Yellowthroat
Belted Kingfisher	Hooded Warbler
Lewis' Woodpecker	Wilson's Warbler
Red-headed Woodpecker	Hepatic Tanager
Ladder-backed Woodpecker	Western Tanager
Downy Woodpecker	Northern Cardinal
Hairy Woodpecker	Rose-breasted Grosbeak
Northern Flicker	Blue Grosbeak
Western Wood-Pewee	Lazuli Bunting
Eastern Wood-Pewee	Indigo Bunting
Eastern Phoebe	Brown Towhee
Say's Phoebe	Cassin's Sparrow
Ash-throated Flycatcher	Rufous-crowned Sparrow
Great Crested Flycatcher	Chipping Sparrow
Cassin's Kingbird	Clay-colored Sparrow
Western Kingbird	Lark Sparrow
Eastern Kingbird	Lark Bunting
Scissor-tailed Flycatcher	Savannah Sparrow
Horned Lark	Grasshopper Sparrow
Cliff Swallow	Lincoln's Sparrow
Barn Swallow	Red-winged Blackbird
Blue Jay	Western Meadowlark
Black-billed Magpie	Great-tailed Grackle
American Crow	Common Grackle
Chihuahuan Raven	Brown-headed Cowbird
Black-capped Chickadee	Orchard Oriole
Plain Titmouse	Northern Oriole
Rock Wren	House Finch
Canyon Wren	Lesser Goldfinch
Bewick's Wren	American Goldfinch
House Wren	Ring-necked Pheasant
Eastern Bluebird	Rock Dove
Mountain Bluebird	European Starling
Swainson's Thrush	House Sparrow

SUMMER (JUNE-JULY) 1987 SEASONAL REPORT

Alexander Brown
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This article summarizes the summer reports of birds seen in Colorado sent to Hugh Kingery, the American Birds 'Mountain West' Regional Editor. These reports show that 268 species were seen in Colorado over the reporting period. In this report, I shall concentrate on the more unusual sightings and new latilong records.

Loons through Pelicans

Four Common Loons were seen in eastern Colorado during the summer, mostly in mid and late July. The five expected grebe species were all reported, with significant numbers of paired Western and Clark's Grebes. The breeding success of Western Grebes seemed to be down on the western slope. White Pelicans and Double-crested Cormorants were both numerous in eastern Colorado.

Hérons through Ibis

All the common herons were seen, including two reports of Cattle Egret, with ten pairs nesting at Monte Vista NWR (RR). However, no Least Bitterns were found. White-faced Ibis had a good nesting season with large numbers reported at Alamosa/Monte Vista NWRs.

Waterfowl

All the usual waterfowl were seen and there was increased breeding success for ducks on the NWRs.

Hawks through Grouse

A Mississippi Kite seen near Pierce, Weld Co. by Opler was north of this bird's normal range and was a new bird for Lat. 5.

Breeding numbers of Peregrine Falcons were the best in recent years with 74 fledglings. This continues a promising upward trend. Prairie Falcons were found breeding at 12,000 feet in the San Juan Mountains (ML).

Gulls through Terns

Common Terns were reported from Highline Reservoir, Mesa Co. on June 2 (BT) and another was at Jackson Reservoir, Morgan Co. on June 4 (WH).

Owls through Hummingbirds

The find of the summer was a female Lesser Nighthawk, a road-kill victim near Montrose on 20 June (MJ). This is only the second documentation of this species for Colorado (See American Birds, 41:1469 for a photograph). A Magnificent Hummingbird photographed by McConnell was a first for Lat. 24. Another was seen by Brockner in Lat. 11.

Kingfisher through Swallows

A Red-headed Woodpecker seen by Merchant was a new latilong record for Lat. 10. Willow Flycatchers were low in numbers in Lat. 10 and Dusky Flycatcher was the commonest flycatcher (JM). Black Phoebe was found nesting at Pueblo Reservoir, becoming only the second known nesting site in Colorado.

Corvids through Wrens

Clark's Nutcracker numbers increased in the Indian Peaks count circle (DB,DH).

Thrushes through Warblers

Several less common migrant warblers lingered into June, including Blue-winged (June 4-6, Boulder Co.), Tennessee (June 3, Balzac, Morgan Co., WH), Blackburnian (June 3, Wheatridge Greenbelt) and Worm-eating (June 8, Hardin, Morgan Co., WH). Unusual for Eagle Co. were Common Yellowthroat and Yellow-breasted Chat (JM).

Tanagers through Finches

Western Tanager numbers were low in some areas of the western slope. A Rose-breasted Grosbeak was seen on June 3 in Wheatridge Greenbelt. Great-tailed Grackles continued their inexorable spread into Colorado with breeding near Salida, Towaoc and Eagle and birds also seen in the Denver area. Black-throated Sparrows breed near Delta (MJ,DL). White-winged Crossbills were seen in western Boulder County on July 11 (DB,DH).

Contributors Arkansas Valley Audubon Society, Audubon Society of W. Colorado, Lou Bainbridge, W.W. Brockner, Alex and Gillian Brown (Boulder Audubon Society), Diane Brown, Jerry Craig, Denver Field Ornithologists, Coen Dexter, Gladys Donahue, Ruby Ebright, Margaret and Clark Ewing, Mike Figs, Peter Gent, Dave Hallock, Phil Hayes, William Howe, Mark Janos, David Jasper, Bill Kaempfer, Hugh Kingery, Dave Leatherman, Rich Levad, Mark Lockwood, Tom McConnell, John Merchant, Paul Opler, Norma Peterson, Joe Rigli, Ronald Ryder, David Silverman, Bert Tignor, US F&WS, Helen and Art Wainwright.

NEWS FROM THE COLORADO BIRD REPORT

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The Colorado Bird Report (CBR) is sponsored by the Denver Field Ornithologists. Its purpose is to provide timely information about the occurrence and location of uncommon birds and to follow bird phenomenon in Colorado and adjoining areas via a recorded telephone message. You can hear this message by calling the CBR at 303-423-5582.

Spring was late this year. This was especially noticeable in lower bird numbers and their arrival dates, which were later than usual. Even though the numbers of birds seen were lower than usual, the quality was up, with a nice assortment of goodies being reported. A Yellow-crowned Night-Heron was seen at Crown Hill in Wheat Ridge on April 14, and the first of Boulder's breeding Great Egrets arrived at Boulder Valley farms on the 23rd of April. So many Great Egrets are being reported in the Barr Lake area and at Chatfield Reservoir, that I think they must be nesting somewhere else also. An adult Little Blue Heron was observed at Hart's Basin in Delta by Janos from April 26th to the 29th, a very rare west slope record. This month's big question was, "How many Eurasian Wigeons were in Weld County in April?" Three were reported at different times and in different places by Jerry Cairo, Joe Himmel and Chuck Olmstead. Were all these sightings the same bird, or were there three different Eurasian Wigeons in Weld County in April? Jerry Cairo has found this species in Weld County for the past several Aprils, and advises to carefully check out all the American Wigeons to find the odd Eurasian. On April 4th, Ron Ryder found Barrow's Goldeneyes and a Surf Scoter at Hamilton Reservoir, and later discovered that a Black Scoter and a White-winged Scoter that had wintered there were still around, and were still present at the end of May!

The big news was that the Red-backed Buzzard had returned to Gunnison, at about the same time good arguments were put forward questioning its mode of arrival (see the last issue of CFO Journal for details). Meanwhile, Phil Hayes got a good look at a Red-shouldered Hawk flying over Chatfield. The bulk of the shorebirds we expect to see in April did not arrive until May, but gave us a good show, not in numbers, but in variety. Exciting April shorebirds were 3 Dunlins found by Coen Dexter

west of Grand Junction at Highline Reservoir, two more Dunlins and a Short-billed Dowitcher first found by Duane Nelson and Dick Schottler at what is always a very good spot in Weld County, 0.7 miles east of the intersections of Weld County Roads 6 and 67. April was very stingy on warblers with few reported, and the only notables being a Townsend's seen in Littleton, and an Ovenbird at Barr Lake.

May is always welcomed in Colorado. There are fewer blizzards and more birds are to be expected. Lots of herons were found that month, with Green-backed Heron reported from the usual spots at Wheat Ridge Greenbelt by Nelson, and at 70th and Broadway by Fran Speal. Another was frequently seen at Dixon Reservoir in Fort Collins by Dave Leatherman. Very exciting was a Glossy Ibis found by Duane Nelson and Jean Robinson south of Lower Latham Reservoir in Weld County. This individual was seen by about 10 different birders on May 24-26th. The bulk of the shorebirds came through Colorado in May this year, with 2 Piping Plovers seen May 27th at the CFO Convention at Lamar, Whimbrels seen three different times with 9 seen at Nee-Grande Reservoir by Tina Jones on May 11. Even better was the great showing of Hudsonian Godwits this May. Ray Spreger found one at the pond east of Weld County 6 and 67, and this bird and a companion were found in this area for another week. Mark Janos found another at John Martin Reservoir on May 21st, with another seen by the CFO Conventioneers at Nee-So-Pah Reservoir.

When I think about May, I think of warblers, but Joe Tenbrink was not thinking of warblers when he observed and then got spectacular photographs of an adult Black-legged Kittiwake on May 21st at Lower Latham Reservoir. This gull stuck around for four days, generally hiding from most observers. An Eastern Wood-Pewee was carefully studied along the Cimarron River on May 27th by the CFO Conventioneers, in the same bush that Vic Zerbi and Bill Prather had discovered it two days earlier. This same group saw Colorado's only breeding Scissor-tailed Flycatchers along the Cimarron River, while wanderers of this species were found in May at Tamarac Ranch by Norm Earthol, and north of Waverly, where Ron Ryder says it has been seen for the last three years. Two different Yellow-throated Vireos were seen in the Denver area in May. The first was found by Ray Spreger in a hedgerow along Weld County Road 45, between Weld County Roads 2 and 4 (a good place to look for redpolls in the winter). The second was found by Bob Spencer at Main Reservoir in Lakewood.

The May warblers were like the May shorebirds, not high in

numbers, but a very good variety. We had 14 different warbler species on the tape in May (with 9 other common species not reported). The highlights were a male Blackburnian that Dick Schottler found in the Wheat Ridge Greenbelt (2nd spring in a row there), a Worm-eating Warbler which Mark Janos found singing for two days in La Junta's city park, and a very secretive, but loudly-singing Kentucky Warbler which Paula Hansley found with her highly practiced ear in Wheat Ridge Greenbelt. Bill Brockner reported getting up at 5:00 a.m. and calling the tape to discover that a singing Kentucky Warbler was in Wheat Ridge Greenbelt. Like any good birder, he took off right away without even leaving a note to his sleeping wife, Sylvia. When he returned later in the day, the first thing Sylvia said was, "Did you find the Kentucky Warbler?" Astonished that Sylvia would know this, Bill asked her how she found out where he was, to which Sylvia replied, "When I got up and you were gone, I called the Colorado Bird Report, and knew right away that you were in the Greenbelt looking for the Kentucky Warbler." Bill warns all birders that their spouses may be secretly using the bird tape to keep track of their movements. May had lots of Rose-breasted Grosbeaks, and more Great-tailed Grackles were seen in the Denver-Greeley area where these birds are probably starting to breed, just as they have in the southern half of the State.

June is the month when the Colorado birds get down to the business of nesting, so it is usually a slow time for the "rare" birds. This June was different however, starting out with late northbound Pectoral and White-rumped Sandpipers, and ending with very early southbound Lesser Yellowlegs, Marbled Godwits, and Baird's Sandpipers all of which were reported from Blue Reservoir near La Junta by Mark Janos, at Lower Latham and northward by Joe Himmel, and from western Kansas by Scott Seltman. A real treat was a Caspian Tern reported by Kevin Borton which stayed for 5 days at Cherry Creek Reservoir in Denver. Even more amazing was a Black Phoebe found by Peter Gent less than one mile west of Kansas at the Hale Ponds below Bonny Reservoir.

If you want to maximize your chances of seeing really rare birds in Colorado, I suggest you find Bill Howe and follow him around. On June 12, he found a singing Eastern Meadowlark in Weld County, the first to be reported in many years, which was seen and heard by 50 to 75 birders. While everyone was up in Weld County looking at Bill's Meadowlark, where was Bill? Bill was at Arapahoe National Wildlife Refuge, finding a singing Sedge Wren in a 50 acre field of sedge. This was a gettable bird also, as several groups were able to see it. On June 19, Thurmond

Cooper found a singing Hooded Warbler in Boulder's Gregory Canyon, which was seen through the 22nd. Not to be outdone, Dorothy Horton found a singing male Golden-winged Warbler in Waterton Canyon southwest of Denver on June 23. This very lost bird was relatively easy to find early in the morning for the next several days. On the 13th, Bob Righter found 35 White-winged Crossbills near the Wyoming line, north of Columbine. Other birders report lots of crossbills, with a couple of probable White-winged thrown in for good measure. Keep your eyes and ears open as mid-summer may be the best time to find the rare White-winged Crossbill in Colorado.

1988 C.F.O. MEMBERSHIP NEWS

Steve Bouricius
50152 Highway 72, Peaceful Valley
Lyons, CO 80540

We would like to express our appreciation to Bob Berman who has donated many hours of his time, effort, and programming expertise to develop a mailing list processing program for the Colorado Field Ornithologists.

The computer software is copyrighted by the American Birding Association Sales. Bob, who is Manager of ABA Sales, wrote the first version of the program in 1986 to automate the mailing list processing requirements of the Aiken Audubon Society. Over the next two years, the program was adapted to three Colorado Springs businesses and recently the C.F.O. received the latest version written in Turbo PASCAL 4.0.

The Mailing List Processing System will help us to maintain and print the membership list, update status, print mailing labels, and sort the labels by zip code zones for bulk mailing. The program is quick and easy to use.

The American Birding Association conducts biennial conventions, weekend tours, and publishes BIRDING, a bi-monthly journal. They also handle books, cassettes and equipment. Membership is \$24. For more information write:

ABA Sales
P.O. Box 6599
Colorado Springs, Co 80934

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1988 BREEDING BIRD ATLAS WORK UNDERWAY

Hugh Kingery
869 Milwaukee St.
Denver, CO

The Breeding Bird Atlas, as of mid-June, boasts five hundred Colorado participants--field workers and contributors. This makes it Colorado's largest participatory ornithological survey, after the one-day Christmas counts.

Preliminary reports indicate lots of gaps filled, and that 1988 will see much more complete field work than last year. With at least twice as many field workers, we hope to do three times as much field work.

Attendees at the C.F.O. annual meeting in May did some field work; the Hepatic Tanager site to which Vic Zerbi takes us lies in the Tobe priority block, and we found Barn Owl nests in both Two Buttes and Carrizo Mountain blocks. Carrizo Mountain (which includes the Forest Service Carrizo campground) also had nesting Prairie Falcons and Curve-billed Thrashers. Steve Jones did a follow-up trip in June and turned it into a four-wren block: House, Bewick's, Rock and Canyon.

Rich Levad has found three Golden Eagle nests in his Grand Junction block. Atlas forays to Latilong 13 (Limon) have turned up five new latilong species and confirmed for the first time nesting of such exotics as Am. Robin. Paul Opler will no doubt continue as champion block buster, since he probably will survey at least 20 blocks this year. Mike Figgs found 89 species in his Saddle Mountain block on the west side of Wolf Creek Pass, and Steve Jones has added five to the 84 species he found in Boulder last year.

The tough blocks to cover are those to which access is tough. Any CFO members who would like to backpack into the back country are welcome to pick up Atlas blocks to give them a focus and a destination.

The Atlas welcomes office helpers who can handle computer input or typing--but the restrictions make it tough: the typewriter and the computer are in Denver and we can use them only during weekday working hours. Anyone who has that sort of skill and freedom should contact me.

-----GENERAL ANNOUNCEMENTS-----

CFO/DMNH CLINICS

There has been a schedule change for the shorebird clinic announced in the last issue of C.F.O. Journal as follows:

-Sept. 10 and 11 Colorado Shorebirds by Ronald Ryder,
professor
emeritus of
Biology, CSU

The clinic will consist of a half day presentation at the Denver Museum of Natural History in City Park, Denver on Saturday followed by field trips to local areas on Sunday.

DENVER AUDUBON SOCIETY CLASS

Denver Audubon Society will sponsor a class this fall for beginning bird watchers. The course features six Saturday morning field trips to Denver-area birding places like Chatfield and Barr Lake State Parks, Red Rocks, and Genessee Park, plus two evening sessions. The course runs from September 29 through November 12. Instructors are Urling and Hugh Kingery, who have taught the course for six years.

Cost for the eight-session class is \$80.00. For course information, contact the Audubon office (860-1471) or register by sending a check for your tuition along with your name, address, and evening and daytime telephone numbers to D.A.S., 975 Grant Street, Denver, Colorado 80203.

The course objective is to teach beginners how to identify birds on their own. The class covers the basics of bird watching -- field guides and how to use them, equipment, and the birds.

