
Journal of the

Colorado Field Ornithologists

The Colorado Field Ornithologists' Quarterly



TABLE OF CONTENTS

A LETTER FROM THE EDITOR.....2

2002 CONVENTION IN DURANGO WITH KENN KAUFMANN.....3

CFO BOARD MEETING MINUTES: 1 DECEMBER 2001.....4

TREE-NESTING HABITAT OF PURPLE MARTINS IN COLORADO.....6
Richard T. Reynolds, David P. Kane, and Deborah M. Finch

OLIN SEWALL PETTINGILL, JR.: AN APPRECIATION.....14
Paul Baicich

MAMMALS IN GREAT HORNED OWL PELLETS FROM BOULDER COUNTY, COLORADO.....16
Rebecca E. Marvil and Alexander Cruz

UPCOMING CFO FIELD TRIPS.....23

THE SHRIKES OF DEARING ROAD, EL PASO COUNTY, COLORADO 1993-2001.....24
Susan H. Craig

RING-BILLED GULLS FEEDING ON RUSSIAN-OLIVE FRUIT.....32
Nicholas Komar

NEWS FROM THE COLORADO BIRD RECORDS COMMITTEE (JANUARY 2002).....35
Tony Leukering

NEWS FROM THE FIELD: THE SUMMER 2001 REPORT (JUNE - JULY).....36
Christopher L. Wood and Lawrence S. Semo

COLORADO FIELD ORNITHOLOGISTS’
MISSION STATEMENT

The Colorado Field Ornithologists exists to: promote the field study, conservation, and enjoyment of Colorado birds; review sightings of rare birds through the Colorado Bird Records Committee and maintain the authoritative list of Colorado birds; publish the *Journal of the Colorado Field Ornithologists*; and conduct field trips and workshops, and hold annual conventions.

Cover: Black Skimmer, a first state record, found on 19 July 2001 by Duane Nelson at Jet Lake, Kiowa County. This picture is from video taken by Chris Wood.

LETTER FROM THE EDITOR

DOUG FAULKNER

Let me begin by saying thank you to our past-editor, Scott Gillihan, and the C.F.O. Board for allowing me this opportunity to give something back to the organization. Scott has generously worked with me on this issue and he will continue as an associate editor.

I will use this first letter to introduce myself, but look for more in subsequent issues as I outline my ideas for new features and regular articles. I will lean heavily on the assistance of the C.F.O. membership to provide much of this new material. Allow me to reiterate a statement that has been made by virtually every new editor of this journal --- this is your publication. Your ideas, comments, and contributions are warmly appreciated.

Since moving to Colorado in January 1999, I have become gradually more active in the birding community. This has given me the opportunity to meet many of you, and I am always amazed at the diversity of Colorado birders. That is one reason I accepted this position -- the challenge of trying to represent the entire membership in one unified publication. Scientists & lay people, hardcore & backyard birders, and seasoned veterans & novices, all make up the membership of this organization. I welcome this challenge and greet it with keyboard and a strong cup of coffee in hand. Thank you.



C.F.O. BOARD INTRODUCES NEW LOGO

This month's journal unveils the new CFO logo designed by Radeaux and typeset by Rachel Hopper. The board felt that the old logo needed updating and the design process was set into motion.

As always, Radeaux created an interpretation of our faithful Magpie that is fresh, clean and modern. While retaining the circular approach to the logo, it is now more conducive to placement on the web, letterheads and envelopes. We hope you enjoy the new logo.

You can see more of Radeaux's artwork in his gallery at 221 S. Union Ave., Pueblo.

2002 Convention in Durango with Kenn Kaufmann

Set aside Memorial Day weekend for the 2002 CFO Convention, Friday May 24 through Monday May 27. The convention will feature many field trips, a trade show, paper sessions and acclaimed birder and author Kenn Kaufmann as the featured speaker for the Saturday banquet. The Doubletree Inn in downtown Durango will be the convention site. Plan to be there. For more information e-mail Convention Chair at cfo-link.org or call Mark Yaeger at (719) 545-8407.



CALL FOR NOMINATIONS FOR RONALD A. RYDER AWARD

On February 25, 1995, the CFO Board of Directors passed a resolution establishing the Ronald A. Ryder Award and presenting the first of these awards to Dr. Ryder. The award was presented to Dr. Ryder for distinguished service to the Colorado Field Ornithologists organization and goals, for scholarly contribution to Colorado Field Ornithology, and for sharing knowledge of Colorado field ornithology with the people of the state. These criteria were established as those which would govern presentation of the award to others in the future. Recipients of the Ronald A. Ryder award are presented a plaque at the annual CFO convention and are granted a life-time membership in the organization. Details are published in a *Journal* issue featuring a cover photograph of the award recipient.

The award, which is presented when nominations have been submitted to and recommended by the Awards Committee and approved by the Board of Directors, has been presented to three distinguished members of the Colorado birding community since that time: Harold R. Holt, Hugh E. Kingery, and Bob Righter.

Members of CFO are encouraged to submit nominations for the award. Nominations may be submitted to Rich Levad, Chair of the Awards Committee, by U.S. mail or via e-mail (addresses are printed on the inside of the front cover). Nominations should include a full description of the nominee's contributions to the Colorado Field Ornithologists and to Colorado field ornithology.

Conservation Project Funding Available

Colorado Field Ornithologists has received a contribution of \$425.00 dollars for a conservation project in Southeastern Colorado to be used in the field season of 2002. The deadline for applying for these funds is March 31, 2002. Please send proposals to Linda Vidal, 855 Wooden Deer Rd, Carbondale, CO 81623, 970-704-9954 or to vidal@rof.net. This is not a Project Fund Grant but is in addition to regular project funding. For any additional information please contact Linda Vidal.

CFO BOARD MINUTES, DECEMBER 1, 2001

Sherry Chapman, Secretary

The regular quarterly meeting of the board of directors of the Colorado Field Ornithologists was held on Saturday, December 1, 2001 at 12:35P.M at the home of BB Hahn, Pueblo, CO with the President in the chair and the Secretary being present. Board members attending: BB Hahn, Norm Lewis, Leon Bright, Mark Yaeger, Rich Levad, Doug Faulkner, Bob Spencer and Warren Finch. The minutes of the prior meeting were approved as read.

PRESIDENT'S REPORT

Mark Janos reported that our membership brochures will be mailed in December to all Colorado Wild Bird Centers and Wild Birds Unlimited stores who have agreed to serve as distribution points.

TREASURER'S REPORT

BB Hahn reported that our current assets are \$25,240.39. She presented a proposed budget for 2002 with estimated income of \$14,751 and expenses of \$14,130 and noted that the proposed budget includes a very conservative income figure for the 2002 Convention. The board voted unanimously to accept the proposed budget.

There is \$425 in the Project Fund to be used for a conservation project in southeastern Colorado. The *JCFO* will publish an announcement of the available funds and the Project Fund Committee will review the applications and grant the funds.

COLORADO BIRD RECORDS COMMITTEE

The committee plans to have the results of the voting on submitted sightings for 2000 published in the Spring 2002 *JCFO*.

FIELD TRIPS

Norm Lewis reported that Pearle Sandstrom-Smith will lead a field trip to Lathrop State Park on February 23, 2002.

JOURNAL EDITOR

New Editor Doug Faulkner would like to start two new sections in the *Journal*; little known birding areas and history from previous *Journals*. Warren Finch volunteered to submit the history under the title "25 Years Ago."

The new editor has additional ideas for regular features and will contact CFO members for contributions.

NOMINATING COMMITTEE

Bob Spencer reported that the terms of several Board members expire in 2002 and as they have agreed to continue to serve, it will not be necessary to elect additional Board members at the 2002 Convention. The term of the Treasurer, BB Hahn, will also expire in 2002. She is willing to continue as Treasurer and the Board will ask the membership to suspend the rules to allow her to run again. (CFO's By-laws limit the Treasurer's term to four years.) Mark Janos announced that he will not be able to serve another term as President.

UNFINISHED BUSINESS

Mark Yeager announced that the Doubletree Inn will be headquarters for the 2002 Convention in Durango. Drew Smith will design the artwork for the registration brochure. Copies of the new Colorado Checklist will be printed and available.

NEW BUSINESS

Peregrine Taking - Mark Janos reported for Rachel Hopper on the Colorado Hawking Club's request to the Colorado Division of Wildlife to allow the taking of four Peregrine Falcon nestlings for use in the sport of falconry. The Board reviewed her letter of opposition written to the CDOW and Rich Levad moved that the CFO endorse it and inform CDOW of our stance. The motion was seconded and passed unanimously.

February Board Meeting - The next meeting of the CFO Board of Directors will be held on February 2, 2002 at 10:00 A.M. at the offices of the Rocky Mountain Bird Observatory, Brighton, CO.



TREE-NESTING HABITAT OF PURPLE MARTINS IN COLORADO

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ABSTRACT—We measured nest tree cavity characteristics and habitat surrounding 17 Purple Martin (*Progne subis*) nests in Colorado in 1987–1988. All nests were in woodpecker cavities in quaking aspen (*Populus tremuloides*) trees and all but one were in mature (> 60 years old) aspen stands adjacent to large openings. The exception was a nest in a single aspen tree in parkland 35 m from the edge of a large aspen stand. Although nest trees contained only one Purple Martin nest, martins sometimes nested in loose colonies when several trees with cavities occurred within a stand.

The breeding range of the Purple Martin extends from the Atlantic to the Pacific coasts and from southern Canada to central Mexico. Before the arrival of Europeans in the east of their range, Purple Martins depended on abandoned woodpecker holes for nests. Now, because much of the primeval forest in the East has been cut, martins there nest almost exclusively in man-provided houses (Allen and Nice 1952; Finlay 1971; Erskine 1979). In the West, however, martins still nest in woodpecker cavities in trees in montane woodlands, and in giant saguaros (*Carnegiea gigantea*) in Sonoran desert-scrub (Grinnel and Storer 1924; Bailey 1928; Van Rossem 1936; Woodbury et al. 1949; Richmond 1953). Up to 20 nesting pairs have been reported in a single tree (Van Rossem 1914; Bailey 1928).

In Colorado, the Purple Martin is considered a rare summer visitor in the transition zone above 2,600 m (Bailey and Niedrach 1965), although several

nesting have been reported in the western counties of Dolores, Las Animas, La Plata, Garfield, Gunnison, Montezuma, and Rio Blanco (Morrison 1886 and Sclater 1912, as cited in Bailey and Niedrach 1965; Svoboda et al. 1980; Zerbi 1985). More recently, confirmed Purple Martin nests were reported in 22 blocks of the Colorado Breeding Bird Atlas Project (Levad 1998). Nonetheless, the nesting habitat of martins in Colorado is still poorly known. Here we provide measurement of nest cavities and nest trees, and describe the habitat features surrounding 17 Purple Martin nests in west-central Colorado.

Study Area

Purple Martin nests were detected during studies of birds and mammals (Finch and Reynolds 1987) in quaking aspen and adjacent spruce-fir forests (*Picea engelmannii* - *Abies lasiocarpa*) in northeast Delta, northwest Gunnison, and northeast Mesa Counties in west-central Colorado (39° 0' N, 107° 3' W) during 1987–89. The study area (300 km²) was characterized by undulating uplands dissected by shallow to moderately steep drainages between 2,000 and 3,000 m elevation. Forests were either pure spruce-fir or spruce-fir mixed with aspen on upper slopes (above 2,500 m) and northern aspects (down to 2,000 m), or pure quaking aspen stands on relatively flat areas (up to 2,500 m) and northern aspects (down to 2,000 m). At elevations between 2,000 and 2,500 m, south-facing slopes were dominated by scrub oak (*Quercus gambelii*). The vegetation mosaic included numerous large (100–500 ha) open parklands located on benches and in wide valley bottoms. Park vegetation was short (<1 m) and consisted of grasses (e.g., *Festuca* spp.), herbs (e.g., *Geranium* spp., *Veratrum* sp.), and shrub species (e.g., *Potentilla* spp., *Artemisia* sp.). Parks were generally bounded on all sides by quaking aspen stands. The majority of spruce-fir and quaking aspen forests in the study area were mature (> 80 yr) to old (> 200 yr). The study area contained scattered stock ponds, mostly in the parks, and numerous ephemeral streams, many with beaver dams. Overland Reservoir (about 1.3 × 1.6 km), on the western edge of the study area, was the only large body of water.

Methods

After the initial discovery of Purple Martin nests in the early summer of 1987, we searched for additional nests throughout the study area in both 1987 and 1988. Due to the distinctive song of nesting Purple Martins and the intensity of our nest searches, we believe that most nests in the study area in both years were found. Nest cavities and surrounding habitats were measured after the young fledged in 1988. Nest heights, cavity dimensions (diameter of entrance hole, cavity depth and width), and tree diameters at nest cavities were determined during climbs to nests. Species composition and structure of the forests surrounding nests, nest tree dimensions, and the position of nests with

respect to forest edge and water were also determined. Height and diameter measures were determined with diameter tapes and clinometers, and distances were measured with a 100 m tape. Inside cavity measurements were determined with flexible rulers.

Rayleigh's statistic (r ; Batschelet 1965) was used to test whether the compass orientation of cavity-hole entrances was different from random orientation, and whether the orientation of cavity-hole entrances was random with respect to the direction to forest openings. The index r describes nest dispersion around a mean orientation vector (0 = high degree of dispersion, 1.0 = low degree of dispersion), where z is the critical value of the Rayleigh test (Durand and Greenwood 1958).

Results

Nesting chronology. We arrived on the study area in the third week of May in both 1987 and 1988. Purple martins were first seen going in and out of nest cavities from the last week of May through the first week of June. Although egg-laying dates were not determined, adults were observed feeding nestlings between 14 and 28 July, and fledglings were seen flying near nests as early as 19 July (1988). A flock of about 30 Purple Martins was seen in late August 1988 in a large tree adjacent to Overland Reservoir in the west of the study area, probably preparing for the fall migration.

Nests. We detected 18 nest attempts by Purple Martins on the study area. Only 17 of the nests were measured, however, because at the time of discovery of one nest attempt, the young martins had fledged and were flying in and out of several cavities, making the identity of the actual nest equivocal. All 17 of the known nests were in woodpecker holes in aspen trees that appeared to have been excavated by Northern Flickers (*Colaptes auratus*) based on the size of the entrance holes (mean = 6.6 cm, SE = 0.21; Gutzwiller and Anderson 1987). Thirteen of the nest trees were alive and four were dead; one of the dead trees had lost its upper half. Cavity dimensions for nests in three of the four snags were not determined because the trees were too rotten to climb.

For the 14 climbable nest trees, the mean diameter [(height + width of hole)/2] of cavity entrance holes, which were nearly circular, was 5.9 cm (SD = 1.0, range = 4.2–7.7 cm). The minimum measurable depth of nest cavities was 24.0 cm and the maximum depth was 47.0 cm (five nest cavities were too deep to measure). The mean inside diameter of 13 cavities (inside diameter of one nest not measured) was 17.9 cm (SD = 4.3, range = 12.0–27.0 cm). The mean nest height (ground to bottom of cavity entrance) was 7.7 m (SD = 2.4, range = 3.9–13.1 m) and mean diameter of the nest trees at the cavity entrance was 29.8 cm (SD =

4.8, range = 19.8–42.0 cm). Compass orientations of the 17 cavity entrances (mean = 136.4° , SD = 87.3) were not significantly different from a uniform distribution ($r=0.23$, $z=0.003$, $P>0.05$). However, cavity entrances of 13 of the 16 (81.3 %) nests within aspen stands were within a 45° arc of adjacent forest openings; none of the cavity entrances were oriented further than 85° from adjacent openings (Fig. 1). The orientation of nest entrances with respect to adjacent openings was not uniform ($r=0.87$, $z=11.0$, $P<0.05$) and most of the Purple Martin nest entrances could be seen from the openings adjacent to

nests.

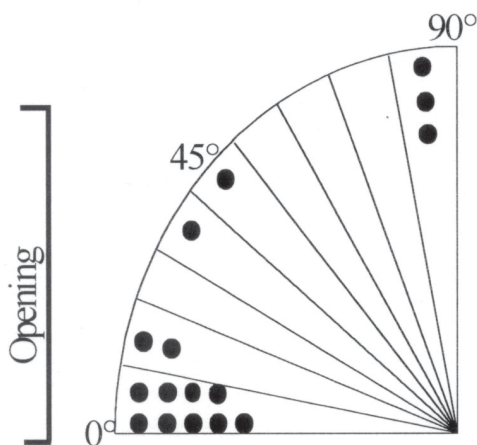


Figure 1. Orientation of 16 Purple Martin nest entrance holes, in 10° increments, with respect to adjacent natural and man-made forest openings. Eighty-one percent of the nest entrances were within a 45° arc of adjacent openings and were visible from the opening.

Nest tree. Mean nest tree height was 20.8 m (SD = 3.8, range = 14.6–25.6 m, $n=17$) and nest tree diameter at breast height (dbh) was 37.5 cm (SD = 7.7, range = 26.5–56.0, $n=17$). All but one of the nest trees were within mature quaking aspen stands ranging in extent from 1–100 ha. The exception was a nest in an isolated aspen tree located 35 m from a large aspen stand in parkland. Thirteen of the nest trees were in aspen stands adjacent to large (>200 m wide) natural parklands, and three were within 20 m of man-created openings—one adjacent to a 15 year-old, 2-ha clearcut, and two adjacent to a 30-m wide electrical powerline clearing through the aspen nest stand. Discounting the nest in a

single tree, the mean distance to nest trees from edge of openings was 24.3 m (SD = 17.4, range = 4–53 m, $n = 16$). Because live crowns in these closed-canopy aspen stands were confined to the upper one-third of trees, and nest heights averaged only 37 percent of tree height (SD = 11.0, range = 23–65%), there was no screening leafy cover in front of any martin cavity. During our studies no martin nests were found in spruce-fir forests.

All nests were on relatively gentle slopes (mean = 14.3%, SD = 9.8, range = 3–38%) and had a mean distance to water, which included small creeks, stock ponds, or beaver (*Castor canadensis*) ponds, of 128 m (SD = 76.9, range = 11–300 m). Understory vegetation in the Purple Martin nest stands consisted of three types: a tall (1–2 m) herbaceous type dominated by *Delphinium* sp., *Thalictrum* sp., *Osmorhiza* sp., *Ligusticum* sp., and *Heracleum* sp. (4 nests); a medium-height (0.1–1.5 m) shrub type dominated by *Symphoricarpos* spp. (10 nests) but also mixed with the above herbaceous species; and a shorter “grass” type dominated by grasses (*Calamagrostis* spp.) and sedges (*Carex* spp.; 3 nests).

Although several Purple Martin nest trees had more than one cavity, none contained more than a single martin nest. Two of the martin nest trees, however, contained a nest of Tree Swallows (*Tachycineta bicolor*) and a third contained nests of a Northern Flicker and a Tree Swallow. No interspecific interactions among the nesting birds were noted (see Tate 1963, Jackson et al. 1982). While no tree had multiple martin nests, several nest stands contained two or more martin nests. One stand had two martin nests 80 m apart, a second had three nests within 40 m of each other, and a third had four nests within 100 m of one another.

Discussion

Purple Martins typically forage in flight from 1–150 m above the ground (Johnston and Hardy 1962). We observed martins in our study area foraging at similar heights over parklands and quaking aspen stands. Most of the martin nests in our study were in aspen stands close to natural or man-made openings. It was not clear if the juxtaposition of nests to openings resulted from selection by the martins for nests near openings (e.g., for ease of access; see Crockett and Hadow 1975), or if the proximity was a consequence of martins being able to see the cavities in the densely-canopied aspen stands when flying low in adjacent openings. The fact that 81 percent of the martin nests in forests were oriented within a 45° arc of adjacent openings, and that most (69%) nests were within 30 m into the stands, suggests that the “population” of prospective cavities from which the martins chose their nests were those that could be seen from the openings. While we observed many

cavities whose entrances were on the sides of trees opposite of the openings, we did not test a “lateral visibility” hypothesis because cavity availability within the aspen stands was not determined.

Jackson and Tate (1974) suggest that the presence of water within sight of martin houses results in higher occupancy by martins. In our study all but one of the martin nests were within 300 m of water. However, the nearest sources of water to 8 of the 17 nests were small, ephemeral streams hidden by low, overhanging vegetation. Although another eight nests were close to small (< 15 m diameter) stock or beaver ponds, water could be seen from only three of these nests (as judged by the tree climber). Overland Reservoir, 8 km from the closest martin nests, was the only large body of water in our study area.

Earlier reports of tree-nesting Purple Martins in the montane west (Van Rossem 1914; Grinnel and Storer 1924; Bailey 1928; Richmond 1953) described multiple nests in large pine, spruce, or “coniferous” snags with many woodpecker cavities. In these cases, the martins probably had responded to the aggregated and highly visible cavities—a situation that may be more common in coniferous forests than in aspen forests. Most mature aspen do not have sufficient trunk girth to contain more than one or two large cavities, nor is it common to find large aspen snags in lone situations or protruding above the canopy. Nevertheless, martins in our study nested in “loose” colonies when several trees with cavities were available within a stand, supporting Brown’s (1979) suggestion that, before the cutting of eastern forests, martins nested singly or in very small colonies.

Acknowledgments

We thank Steven T. Bedard, Harold D. Brown, Scott W. Gillihan, Suzanne M. Joy, Thomas B. Mears, Susan R. MacVean, Burt D. Nolan, Bonnie L. Rusk, Scott E. Severs, Sandy T. Spon, Daniel H. Strait, Donald K. Ward, and David J. Worthington for help in locating and measuring martin nests. Robert Hamre, Suzanne Joy, and Rudy King commented on the manuscript.

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A BIT OF *JCFO* HISTORY

10 Years Ago in the Journal...

John Prather recounted the discovery of a Buff-breasted Flycatcher at the Hannah Ranch State Wildlife Area.

15 Years Ago in the Journal...

Jerry Cairo and Bob Righter provided a synopsis on potential first state records yet to be discovered, including Black Skimmer.

20 Years Ago in the Journal...

An article by Thomas VanZandt described his discovery of remains of a Peregrine Falcon in a Golden Eagle eyrie.

25 Years Ago in the Journal...

The Identification Notes section examined the differences between female Black-headed and Rose-breasted Grosbeaks.

Olin Sewall Pettingill, Jr.: An Appreciation

Paul Baicich

The two very first birdfinding guides to encourage long-range travel and appreciation of birds were: *A Guide to Bird-Finding East of the Mississippi* and *A Guide to Bird-finding West of the Mississippi*. Published in 1951 and 1953, respectively, they were the brainchild of Dr. Olin Sewall Pettingill, Jr.

Products of the post-war expansion of travel and of prosperity, these two guides opened up a world of birds to those willing to travel beyond their home areas. From his teaching position at Carleton College in Minnesota, Pettingill estimated that one book on U.S. sites was the text target, with a potential audience of “serious to casual bird-watchers.” What was a one-book plan evolved into a two-book reality. Combined, the volumes sold just short of 20,000 copies. It set a standard, one which future birdfinding guides copied and perfected.

Pettingill’s credentials were not simply recreational, they were also ornithological. Along with such luminaries as Ludlow Griscom, Herbert Friedman, Peter Kellogg, and George Sutton, he was a product of Arthur A. Allen’s pre-war “Grad Lab” at Cornell. He had already made his mark by his *Laboratory and Field Manual of Ornithology*, launched in 1939. This volume would be revised (four more times) and used in over a 100 colleges and universities in well over 40 states. Pettingill taught ornithology at Carleton College for 17 years.

Had Olin Sewall Pettingill, Jr. stopped with the two guides and the one manual, he would have been duly lauded in birding and ornithological lore. But he kept going. From 1957 to 1968, he wrote a birdfinding column in *Audubon* magazine; there were 62 columns in all. He served on National Audubon Society’s board for 19 years (1955-1974), was the Director of the Cornell Laboratory of Ornithology (1960-1973), produced films (on albatrosses, penguins, and other topics), and taught at the University of Michigan Biological

Station for 35 summers. Among his many accomplishments, he co-authored a classic birdfinding guide - *Enjoying Birds Around New York City*, written with Robert S. Arbib, Jr. and Sally Hoyt Spofford in 1966. In 1972, he launched the first edition of the Cornell Laboratory of Ornithology's popular Home Study Course in Bird Biology. Later, he re-wrote his two classic birdfinding guides (1977 and 1981, respectively). His insightful autobiography, *My Way to Ornithology*, was published in 1992.

The Cornell Lab's Arthur A. Allen Award, for those individuals who have worked to widen popular interest in ornithology, went to Pettingill in 1974.

At the 1982 American Birding Association Convention, in Plantation, Florida, he was the recipient of ABA's highest honor, the Ludlow Griscom Award. It was only the second award ABA had given, the first having been awarded to Roger Tory Peterson in 1980.

Dr. Olin Sewall Pettingill, Jr. passed away on 11 December 2001 in Bedford, Texas, at the age of 94.

CFO SUPPORTS ETHICS CODES

The Colorado Field Ornithologists is dedicated to the conservation of avian species and to increasing the public awareness of human impact on birds. As one step toward achieving these goals, the CFO Board has endorsed the American Birding Association's (ABA) *Birding Code of Ethics* and the Ornithological Council (OC) of North American Ornithological Societies' *Code of Ethics*. The full text of the ABA *Code* and a synopsis of the OC *Code* can be found in the October issue of 2000.

MAMMALS IN GREAT HORNED OWL PELLETS FROM BOULDER COUNTY, COLORADO

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ABSTRACT--We collected Great Horned Owl (*Bubo virginianus*) pellets from two different Boulder County localities, ponderosa pine/grassland (ponderosa site) and cottonwood grove/farmland (farmland site) habitats to determine the use of prey items. In the pellets, we found the remains of nine mammalian species in the orders Rodentia and Lagomorpha. In terms of percent occurrence, the most common prey items on both sites were prairie voles (*Microtus ochrogaster*), deer mice (*Peromyscus maniculatus*), and harvest mice (*Reithrodontomys megalotis*). We found a greater diversity of prey items (10 species) in the pellets collected from the ponderosa site, including the presence of several species of lagomorphs and voles. The greater diversity of prey items from the ponderosa site is most likely a result of the greater diversity of microhabitats present at this site in contrast to the farmland site (six species). The Norway rat, as a prey item, was recorded only at the farmland site, reflecting the association of this alien species with human-related habitats.

Introduction

Great Horned Owls feed primarily on small mammals and birds and regurgitate the fur/feathers and bones in pellets. Because owls often have a preferred roosting site, pellets can be easily collected from under the roosting tree. By analyzing the pellet contents, we can, for example, obtain information not only on the diet of the Great Horned Owl, but on what prey species (e.g., small mammals) are present in areas where the owls feed (Marti and Kochert 1996). The project involved collecting Great Horned Owl pellets from two different Boulder County sites during December 1985 and February 1986. Samples from different areas may allow for a comparison of prey species as a function of habitat.

If you like this article see also The Colorado Field Ornithologist No.19, 1974.

Study Area and Methods

Owl pellets were located by searching on the ground and at the base of roosting sites (cottonwoods – *Populus sp.* and ponderosa pine – *Pinus ponderosa*) of Great Horned Owls in ponderosa pine/grassland (ponderosa site) and cottonwood grove/farmland (farmland site) habitats. The ponderosa site was located near the junction of Marshall Road and Cherryvale Road, southeast of Boulder in Boulder County. The farmland site was located 0.8 km north of the juncture of Arapahoe Road and 119th Street, northeast of Lafayette. On December 5, 24 whole pellets and more than 15 fragmented pellets were collected from the ponderosa site. On December 6, 18 whole pellets and about 10 fragmented pellets were collected from the farmland site. Two and a half months later, on February 18, 21 whole pellets and about 15 fragmented pellets were collected from the farmland site. On February 19, 30 whole pellets and about 20 fragmented pellets were collected from the ponderosa pine site. The pellets only contained mammalian fragments.

The identification of mammalian fauna in the pellets involved separating the bones from fur, and then separating the skulls and mandibles, if present, from the other bones. The December pellets were separated by the dry method which involved separating the bones from a dried pellet. We used the wet method for separating the February pellets which involved placing them in water and teasing the fur from the bones. This allowed the bones to sink and the fur to float. After the separation process, only the bones containing teeth or empty alveoli (socket in jaw in which tooth is set) were used in the analysis. Several references were used to identify these bones. Giblet (1980) was most helpful in teeth identification. Olden (1980) is not as explicit with teeth patterns, but does show pictures of the entire mandible and skull and was thus useful in identifying parts that could not be identified by teeth pattern alone. The University of Colorado Museum collection was used to compare and identify more difficult skeletal material. All the collected specimens were identified to the species level except for jackrabbits (*Lepus*) and cottontail rabbits (*Sylvilagus*), which could not be identified to species because the collected parts were too fragmented. Armstrong (1972) and Fitzgerald et al. (1994) were used to determine habitat use by small mammals.

Results and Discussion

The collection of 78 pellets yielded 230 prey individuals and 11 species representing two orders, Lagomorpha and Rodentia. In terms of percent occurrence, the three most common prey items at both sites were prairie voles, deer mice, and harvest mice (Table 1).

Table 1. Contents of Great Horned Owl pellets from two sites in Boulder County during the winter of 1995-96 (number of individuals with percent occurrence in parentheses).

Species	<u>Ponderosa Site</u>		<u>Farmland Site</u>	
	5 Dec	19 Feb	5 Dec	19 Feb
<i>Microtus pennsylvanicus</i> meadow vole	11(20.8)	3(3.8)	0	0
<i>Microtus ochrogaster</i> prairie vole	16(30.2)	20(25.0)	6(23.0)	18(25.4)
<i>Microtus montanus</i> montane vole	1(1.9)	0	0	0
<i>Chaetodipus hispidus</i> hispid pocket mouse	2(3.8)	6(7.5)	1(3.9)	4(5.6)
<i>Peromyscus maniculatus</i> deer mouse	12(22.6)	14(17.5)	13(50.0)	20(28.2)
<i>Rattus norvegicus</i> Norway rat	0	0	3(11.5)	0
<i>Reithrodontomys megalotis</i> western harvest mouse	3(5.7)	25(31.3)	3(11.5)	28(39.4)
<i>Thomomys talpoides</i> northern pocket gopher	1(1.8)	0	0	0
<i>Cryptotis parva</i> least shrew	0	3(3.7)	0	1(1.4)
<i>Lepus</i> sp. jackrabbit	4(7.5)	7(8.7)	0	0
<i>Sylvilagus</i> sp. cottontail rabbit	3(5.7)	2(2.5)	0	0
Number of individuals	53(100.0)	80(100.0)	26(99.9)	71(100)
Number of species	9	8	5	5

In comparing the differences in pellet compositions between the two habitat types, one obvious difference from the pellets was the greater mammalian diversity at the ponderosa site (10 species) than the farmland site (six species) (Table 1). This was most likely a result of the greater diversity of habitats in which the owl forages, such as ponderosa pine, grassland, nearby farmland and buildings, and cottonwood trees within 100 m of the owl's roosting site. The ponderosa site also contained rocky slopes, providing an additional microhabitat for small mammals. The farmland site, on the other hand, consisted of a cottonwood grove surrounding a pond and farmland bordering the grove, with some farm buildings nearby. There were no ponderosa pines or rocky slopes in the vicinity, and very little uncultivated grassland.

The Norway Rat (*Rattus norvegicus*) was only found in pellets from the farmland site. Because this non-native species tends to inhabit areas with buildings, this finding may simply reflect the fact that more farm buildings and agricultural areas are in the vicinity of the cottonwood grove.

Another discrepancy is the collection of a large sample of meadow voles (*Microtus pennsylvanicus*) in the ponderosa site, but none in the farmland site (Table 1). In contrast, Cruzan (1968) trapped several meadow voles, but no prairie voles in areas within 3.2 km of the farmland site. Because the trapped voles were found in areas of thick grass, perhaps a scarcity of this habitat type near the farmland site results in a lack of meadow voles. However, we did find several prairie vole skulls and mandibles, while Cruzan (1968) found only one prairie vole and 94 meadow voles from all the traps he set at nine different grassland habitat plots (below 1564 m elevation) north and east of Boulder. Cruzan's data sharply contrast to our total values of 60 and 14 prey items, respectively, for prairie and meadow voles. The reason for this relative number difference in voles is not known. Fitzgerald et al. (1994) note, that in areas of overlap, the meadow vole typically occurs in wetter areas, and the prairie voles occupies drier areas.

Several lagomorphs were collected from the ponderosa site and none from the farmland site. Because lagomorphs are a common prey item of Great Horned Owls, this discrepancy was somewhat surprising. Marti (1974) found that in Larimer County, lagomorphs comprised from 10-43% of the owl's diet depending on the time of year. The data we obtained suggest that few or no lagomorphs inhabit the foraging area of the farmland site owl. Since the lagomorph bones were too fragmented, we were unable to identify to the species level. According to Armstrong (1972, 1987) and Fitzgerald et al. (1994), three species of cottontails occur in the area. The mountain cottontail (*Sylvilagus nuttallii*) and the eastern cottontail (*S. floridanus*) inhabit edges

of coniferous woodlands and streams, respectively. The desert cottontail (*S. audubonii*) prefers scrublands and edges of woodlands. The white-tailed Jackrabbit (*Lepus townsendii*) more commonly inhabits areas that have not been overgrazed by domestic stock or cultivated. Black-tailed Jackrabbits (*L. californicus*), on the other hand, prefers agricultural areas (Armstrong 1972, Fitzgerald et al. 1994). In view of this distributional information, it seems likely that only Black-tailed Jackrabbits might inhabit the cultivated land near the farmland site. Yet, no skulls of this species were found in the owl pellets.

Bearing in mind that we do not know the season of pellet formation for the December collection, there are differences in prey composition between the December and the February collections. Most notably is the increase of the western harvest mouse (*Reithrodontomys megalotis*) in both sites from the December collection (Table 1). One explanation for this large increase in harvest mice may be the variance in the pellet separation techniques (i.e., dry vs. wet method). The dry method, used with the December collection, may have resulted in breakage and/or loss of many smaller mandibles and skulls in the pellet, such as those of the harvest mouse. The wet method, on the other hand, provides a "gentler" way of teasing the fur from the bones and it probably results in collection of more small, undamaged mandibles and skulls.

Differences in separation procedure, however, may not solely account for the differences in harvest mice numbers. Perhaps, there are more harvest mice individuals than voles during the winter months, or they are more active and thus more easily captured by the Great Horned Owls. However, Marti (1974) collected data on the seasonal variation in the Great Horned Owl prey in Larimer County and found that the number of harvest mice collected in January was 22.2% of the total while the number of deer mice was 46.5%. By February, the value for harvest mice dropped to 5.2% and deer mice dropped to only 29.7%. October to December combined values were 4.1% and 14.3%, respectively. According to Jones et al. (1983), both harvest mice and deer mice are active throughout the year. However, they are reported to hibernate in Nevada (O'Farrell 1974) and short periods of winter torpor occur in our area (Fitzgerald et al. 1994). In addition, harvest mice are gregarious and tend to huddle together in the winter for mutual warmth and are "more leisurely in their activities than most mammals of their size, spending much of their time in the nest" (Jones et al. 1983). While this information contradicts our findings, we should note that the temperatures during January and February of the study period were unseasonably high, which may have induced increased activity from harvest mice.

Least shrew (*Cryptotis parva*) skulls and mandibles were also found in pellets

in February, but none in December. Because these bones are quite small and fragile, we believe that this difference is simply a reflection of the different separation techniques. The northern Front Range of Colorado marks the western edge of the distribution of the Least Shrew (Fitzgerald et al. 1994).

Concluding Remarks

This study was undertaken as part of a mammalogy class project at the University of Colorado, and while it provides some information on the feeding habits of the Great Horned Owl, much remains to be known about its feeding habits in Boulder County. Future studies should look at prey remains in pellets collected on a monthly or seasonal basis to determine seasonal changes in prey use. While roosting sites may be located in a given habitat, the owls' foraging areas or home ranges were not known. Information is needed on the home ranges of owls and the habitat composition within the home range. For example, the average home range size for 12 radio-tagged males Great Horned Owls from studies in Colorado, Idaho, Minnesota, and Wisconsin is 1.1 km (Fuller 1979, Petersen 1979, Andersen and Rongstad 1984, and Marti and Kochert 1996). Nevertheless, bones from owl pellets are useful because they provide information on the diet of the Great Horned Owl and what prey species occur in an area.

Acknowledgements

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<http://www.cfo-link.org>

UPCOMING CFO FIELD TRIPS

Feb. 23, 2002 **Run With the Roadrunners** Join Pearle Sandstrom-Smith to explore Lathrop State Park and the surrounding area for roadrunners, thrashers, bushtits, and other overwintering specialties of the region. Meet at the parking lot at Lathrop S.P. at 8:00 A.M. RSVP with Pearle at 719-489-2869. Trip will be cancelled in the event of heavy snow.

March 30 and 31, 2002 **Owl Prowl** with Rich Levad. On this popular trip we will join Rich and the Grand Valley Audubon Society to look for owls. Meet at 1:00 P.M. at the Dinosaur Journey parking lot in Fruita, south of the I-70 interchange. The trip will begin with looking for owls in the lower end of the Grand Valley in the afternoon, followed by dinner. The group will then spend the evening looking for montane owls. Barn Owl, Long-eared Owl, Great Horned Owl, Western Screech-Owl, Burrowing Owl and Northern Saw-whet Owl have all been seen on this trip in the past. Northern Pygmy-Owl and Boreal Owl are possible. RSVP with Rich at rich.levad@rmbo.org.

July 27, 2002 **Black Swifts** Join Sue Hirshman to view black swifts near Ouray in the beautiful San Juan Mountains of southwest Colorado. Sue will guide us to active nests of these fascinating birds, where we can observe adults, and possibly recently hatched young birds. There will be additional birding in the area after we see the swifts. Check the next journal for trip details.

NOTICE TO FIELD TRIP PARTICIPANTS

Please contact the field trip leader at least one week ahead if you plan to participate. Trips often go where participant numbers must be limited or where notice of participant numbers is required. Contacting the leader in advance also helps him/her plan the best possible trip, ensures that you know where/when to meet, what to bring, etc. Please arrive no later than the scheduled meeting time; leaders may not be able to delay departure for late arrivals. Carpool drivers should inform passengers of their schedule prior to departure to avoid scheduling conflicts. Leaders will make every effort to keep the group together, and drivers should make every effort to stay with the group.

THE SHRIKES OF DEARING ROAD EL PASO COUNTY, COLORADO 1993-2001

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While living in Florida in the late 1980s, I was impressed by the many Loggerhead Shrikes (*Lanius ludovicianus*) wintering there and became intrigued at the possibility of developing a trap to capture shrikes for banding. After moving back to Colorado in 1991, I continued working on the trap. Taking cues from shrike behavior eventually led me to a new, very successful design with a capture rate over 94%. Since I now had the means to capture shrikes consistently, I designed and implemented a Loggerhead Shrike banding study* in 1993. The following account is focused primarily on a 1.6 km-square area in central El Paso County, bounded on the north and east by Dearing Road, Myers Road on the south, and Squirrel Creek Road on the west (Fig. 1). Observations and trapping usually took place March - August.

In the spring of 1993, I discovered what appeared to be a concentration of shrikes at the Dearing Road location. Surrounded by short-grass habitat, this site contains numerous possible nest trees (Figs. 2 & 3). At least three pairs were present, presumably nesting, at sites 1, 5 & 9 (Fig. 1). At site 1, 0.32 km east of the intersection of Squirrel Creek and Dearing Roads, I found a nest situated low (1.4 m high) in a small (3.1 m tall) isolated Chinese elm (*Ulmus parvifolia*) on the south side of the road, just outside the fence of an adjacent cattle pasture. The nest contained four nestlings. In subsequent visits, during the summer, I trapped and banded a total of five adult and immature shrikes in the vicinity.

The following spring (1994) I returned to the site and found that the nest tree had been partially destroyed during the winter by a snowplow. Shrikes had built a new nest on the north side of Dearing (Site 2), at 0.65 km east of the Dearing/Squirrel Creek intersection. Since my time in the field was limited that summer, I was not able to observe nesting success for that particular pair, but found two more active nests (Sites 5 & 11) in the Dearing area.

In early April 1995, I found a pair of shrikes attending a new nest in the same

* The study involves a survey by age, sex and subspecies of shrikes wintering in Texas and Florida, plus those migrating through and breeding in Colorado.

tree (Site 2). Alas, springtime in Colorado is notoriously fickle, and a harsh spring storm destroyed the nest. It had apparently filled with rain and snow, causing one side to buckle outward, spilling four eggs onto the ground. The pair rebuilt across the road in a thicker elm (Site 3), but another cold, wet storm during the third week of May destroyed that nest also. Searches in June failed to locate another nest. However, to my surprise, in July I found the pair in the same location feeding two fledglings. The third nesting effort, which I had not been able to find, had succeeded. During this year's fieldwork, I banded and observed six more shrikes in the area. There were two other occupied breeding sites (Sites 6 & 10) near Site 3, in addition to the one I never found.

In 1996, three nest sites were occupied (Sites 2, 11 & 12). I color-banded about 50 shrikes in El Paso County, giving each bird a unique color pattern; this enables individual identification without need for recapture. Color-banding paid off in at least one instance; in March, I captured and color-banded a second year bird near Site 10. Because the bird was not in breeding condition, I was unable to determine sex. A month later, however, as I drove by Site 11, a shrike slipped off her nest and flew away. As she left, I was able to see her color bands, allowing me to identify her and amend my data. Unfortunately, because of inexperience, this shrike had built her nest only 0.7 meters from the ground. The eggs disappeared before hatching. I often found snake "tracks" in the soft sand of the road. I wonder if a bull snake was the predator in this case. Other predators observed in the area include Merlin (*Falco columbarius*), Cooper's Hawk (*Accipiter cooperii*), coyotes, and a pair of Great Horned Owls (*Bubo virginianus*) that nested in a large cottonwood tree at Site 4 in 1998.

In 1997, there were six nesting pairs within the Dearing/Myers/Squirrel Creek location (Sites 2, 5, 8, 9, 10 & 12). That year, I was able to spend more time observing Loggerhead Shrikes in the area. All pairs produced at least two fledglings with some having as many as four. Other nest sites to the west and north of the Dearing Road location also produced fledglings. Clearly, 1997 was a banner year for nesting Loggerhead Shrikes.

Research in north-central Colorado (Porter et al. 1975) indicates that Loggerhead Shrikes will re-nest if the first nest is destroyed by weather or predation. Other researchers (Kridelbaugh 1983, Yosef 1996, Lefranc 1997) suggest that, if conditions are favorable, a pair will build a new nest and produce a second brood after the first fledges. Until 1997, I had not observed this phenomenon. However, in early July of that year, at Site 8, I found a breeding pair with at least 3 fledglings. When I captured the adult female, I was surprised to find she had an engorged brood patch, indicating that she was on eggs. At still another nest site, approximately 9.6 km west of the Dearing Road

concentration, a pair of shrikes produced 3 or 4 fledglings in June, and then nested. This was verified when I observed older fledgling shrikes at the site in early July and then captured the adult female. Her engorged brood patch indicated that she, like the Dearing Road bird, was also brooding eggs. A week later, however, a series of wet, violent storms moved through and, with their fledglings, the breeding pairs migrated out, abandoning the nesting effort. Shrike migration was in full swing by the end of July.

In 1998, there were only three nests at the Dearing Road location (Sites 3, 8 & 12), but all produced fledglings. The pair nesting at the dogleg near the south end of Squirrel Creek (Site 12) produced fledglings in May and were then displaced by Northern Mockingbirds (*Mimus polyglottos*). Many adult shrikes at the Dearing site are now banded and trap shy. Nevertheless, I recaptured one of my banded birds, plus one of his fledglings at Site 8. In June, I found a pair of birds with fledglings at the east-west Dearing site (Site 3). I placed the trap near the nest tree, backed the car away, and watched results. Two of the fledglings flew down to the baited trap, and I anticipated catching them quickly. As I watched, a banded adult suddenly appeared on the ground, placing itself between the fledglings and the trap. I was too far away to hear vocalizations, but the adult apparently warned the young birds away from the trap. All three promptly flew back up into the tree. This was my first observation of such behavior.

Another time, I watched an unbanded adult summon a fledgling to the trap. The adult perched on top of the trap, alternately looking at the youngster and then down at the mouse, calling all the while. Finally the fledgling came to the trap, hopped in and was caught. Only then did the adult jump down to the surface of the road.

Unlike the previous year, shrikes remained in territorial breeding areas well into August. On August 29, I caught 2 migrating shrikes approximately 2 km north of the Dearing Road site. Both were quite young with tails and bills not yet fully grown and were presumed to be second-clutch birds. I encountered many migrating shrike families in August: adults with one or two juveniles or, occasionally, two juveniles together working their way south.

In 1999, thanks to a small grant from USGS-FWS in Denver, I was able to spend nearly three weeks on the road chasing shrikes, banding a total of 130 birds in El Paso County and the northern half of Colorado. Adverse spring weather delayed the arrival of many breeding shrikes until the fourth week of April. One or two early nesters at the Dearing Road location built nests (Sites 2 & 11) and produced eggs in March, but these efforts were once again lost in harsh spring

weather. Since many of the adult shrikes at Dearing Road were banded and wary of the trap, I visited the site infrequently. Four pairs eventually nested at the Dearing Road site (Sites 3, 8, 10 & 11), and nesting success was average (2-3 fledglings/pair).

The USGS-FWS grant enabled me to explore areas in northern Colorado. In the course of looking for shrikes, I drove many miles over the Pawnee National Grassland's short-grass habitat, which presents ideal foraging conditions for many bird species. Restoration efforts in the Grasslands have recreated the pre-settlement, native look of years ago by removing introduced tree and shrub species. Such restoration benefits many ground-nesting birds, but has subsequently destroyed cover and nesting sites for tree and shrub-nesters like Loggerhead Shrikes. For me, this was a lesson in one of the negative aspects of habitat restoration.

I was pleased to receive notification of a banding recovery in late 1999. A shrike I banded in July near Calhan in eastern El Paso County was recovered near Manheim, Texas in November of the same year. Unfortunately, the bird had been killed by a car. Being hit by passing cars has been cited as a significant cause of shrike mortality (Flickinger 1993). Indeed, during this summer's work, I found two fledgling shrikes dead on the road.

In 2000, high fuel prices curtailed the study. As a result, I was able to visit the Dearing Road site only four or five times. I was greatly dismayed to discover that property west of the Dearing Road site had been sold and subdivided into 15-acre plots. Large gravel trucks and construction equipment rumbled up and down Myers Road, disrupting shrike nesting and forcing abandonment of at least one historical nest site (Site 8).

As a result of this disruption, two new nests were built (Sites 4 & 7). In a large cottonwood tree on the NE corner of Dearing (Site 4), previously used by a pair of Great Horned Owls, a nest was established, producing four offspring. Both adult shrikes and three of the fledglings were banded in July. Another pair relocated from the corner of Dearing and Myers (Site 8) to the north side of the house into a row of Russian Olives (*Elaeagnus angustifolia* - Site 7). I was not able to determine nesting success at this new site, although I heard young begging in June. Migration began early and shrikes were on the move by late July.

Opportunity allowed me to visit the site again in early December 2000 when a single warm day made trapping possible. Although I had not anticipated finding shrikes because of intense cold weather during November, I was

surprised to find seven shrikes, either at the site or within a few kilometers. I caught four of those birds, all females, and all with evidence of fresh insect remains on their bills; two of the birds were palpably fat. I wondered why didn't I catch any males, but then recalled that two of the seven birds seen that day behaved like banded birds. When they saw my car slow down and stop, they promptly flew away.

Porter et al. (1975) indicates that shrikes are indeed early nesters and finding nests with eggs in mid- to late March is not uncommon. Although winter surveys in eastern El Paso County reveal small numbers of Loggerhead and Northern Shrikes (*Lanius excubitor*), I had often wondered where those early nesting Loggerhead Shrikes originated. I attributed their presence to early arrivals, birds that had perhaps wintered in southern Colorado or northern New Mexico, and so were able to claim nesting territories before the more southerly-wintering birds arrived in April. Since I had never visited the site in December, this single visit solved the mystery. Apparently, part of this breeding population over-winters.

In December, I discovered that part of the Dearing Road site itself had been sold and subdivided. The southern half of the property now contains several trailers. At Site 12, trees were being cut down near the trailer that sits under them; another trailer now sits near Site 11 at the dogleg on the west side of Squirrel Creek Road. Recently, a trailer was moved into position under the nest tree at Site 10. So far, the people that own the north end of the property are determined to keep the land intact, although they're disturbed by the quality of their new neighbors. (They've heard automatic weapons fire on a number of occasions and police cars and helicopters visited one of the trailers recently). The area is clearly due for more disruption than ever before.

In 2001, severe spring storms pounded El Paso County. Strong winds, snow, large hail and freezing rain in April and May wreaked havoc on nesting birds. Most brooding shrikes lost their nests and had to begin again. But an odd thing happened following the storm over Memorial Day weekend - many shrikes simply left the area. In June, I visited many historic nest sites all over eastern El Paso County, perplexed to find these sites empty. Unrelenting hot weather prevented me from fieldwork again until July. I was surprised to find a few of the old sites occupied, but also nesting in new locations. In spite of the season's rough beginning, most fledgling broods contained three or four youngsters. Migration began the second week in August.

At the Dearing Road location, only two pairs of shrikes nested successfully, one pair each at Sites 3 and 7. High gas prices and high temperatures kept me

out of the field, resulting in only 46 birds banded. On the plus side, I recaptured four birds banded in previous years. One bird banded and recaptured near Karval was an adult (after second year) in 1999. This means he is at least five years old. Most of my recaptures occur within the same 10 minute block as original capture, which supports evidence of the high site fidelity found by other shrike researchers (Porter et al. 1975, Kridelbaugh 1983).

Conclusions

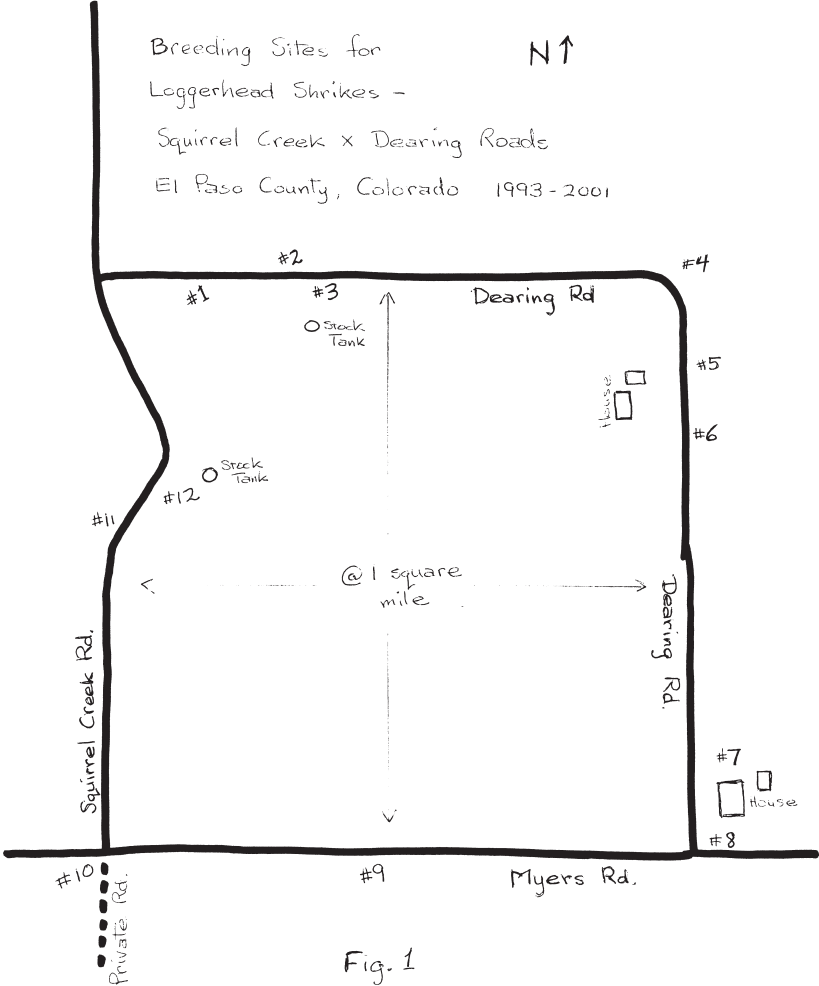
Loggerhead Shrike populations continue to decline across the continent, stimulating several captive breeding efforts, especially in California and Ontario, Canada, which have been underway for some time. Currently, it appears that Colorado's breeding shrikes are maintaining their numbers. In the near future, however, we can be certain that increasing human population pressure is guaranteed to bring negative results to our shrikes. Because the Dearing Road site is unique in its ideal nesting habitat and concentration, I'll continue to monitor this special site for as long as shrikes keep nesting here.

Acknowledgments

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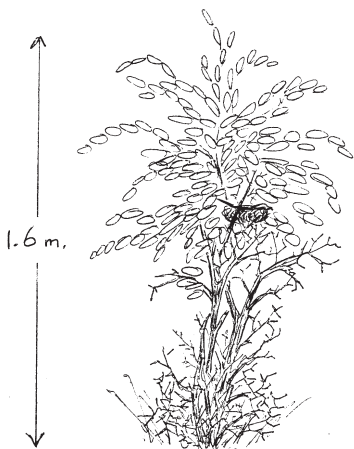


Fig. 2
Ulmus sp. - Summer
(Excluded from
cattle rubbing)

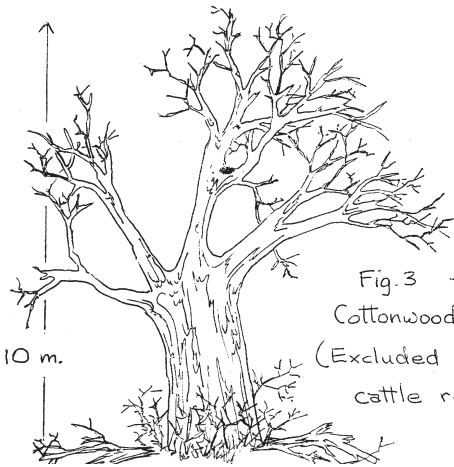


Fig.3 - Winter
Cottonwood - Populus sp.
(Excluded from
cattle rubbing)

RING-BILLED GULLS FEEDING ON RUSSIAN-OLIVE FRUIT

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When I think of pairs of symbiotic species, the last pair that would come to mind would be the Ring-billed Gull (*Larus delawarensis*) and the Russian-olive (*Elaeagnus angustifolia*). Yet on the cold, drizzly afternoon of November 18, 2001, David Bray and I witnessed a convergence of these two species that would seem to be mutually beneficial for both species. Along the edge of a small gravel pit pond, a flock of some 10 gulls were observed plucking the berry-sized fruits of several small Russian-olive trees. This feeding frenzy was accomplished while in flight except for some brief moments when a gull would alight, wings spread for balance in the stormy breeze, on a small branch. Usually, the perching would last for not longer than a few seconds. However, it was this behavior that first drew our attention to the spectacle. While driving by this small lake alongside Namaqua Avenue in southwest Loveland, Larimer County, I had noticed in my peripheral vision a gull, wings spread, apparently perched in a small tree! Something about this vision did not seem right, so we turned the car around to return to the spot, and the gull was still there, perhaps 20 seconds or so later.

The gulls fed on the berries much the same way as a gull would pluck a chip from the offering hand of a passenger on the deck of a ferry. Each gull approached the tree and hovered briefly while reaching its head down to pluck the food away with its beak. The gull then flew around in a circle and repeated the behavior. We stayed and watched for several minutes, filming about three minutes of video (Fig. 1).

I don't know whether Ring-billed Gulls frequently feed on Russian-olive fruit; there is no reference to this diet in the species account in the Birds of North America (Ryder 1993). I had not observed any gull engaging in this behavior in Colorado, in spite of approximately 1000 hours of field observation of birds in the state since 1997. None of approximately 480 Colorado birders responded to my request for reports of this behavior on the COBIRDS listserve. Needless to say, there is plenty of opportunity for gulls to eat the fruit of Russian-olives, as both of these species are abundant in Colorado, and both may be encountered near the shores of lakes and ponds. Consultation with more than 1000 nationwide observers of birds on the BIRDCHAT listserve revealed that Ring-

billed Gulls do occasionally feed on fruits and nuts (see also Cottam 1944). Ring-billed Gulls feeding on Russian-olive fruit at one location in Montana periodically during the last decade were photographed by Charles Carlson, who suggested that the Russian-olive fruit-eating gulls in Colorado may be migrants from Montana (pers. comm.) Our observation in Loveland was not limited to November 18. David Bray witnessed the same behavior on subsequent days at the same location, including days with less wind. Also, nearby at Lake Loveland, David Bray witnessed Ring-billed Gulls together with other species of waterfowl, including Wood Ducks (*Aix sponsa*), feeding on fallen Russian-olive fruit. Wood Ducks and other species of waterfowl are known to feed on Russian-olive fruit (Tesky 1992, Leatherman 1999).

Russian-olives have long been the center of controversy in the wildlife conservation community. On the one hand, the tree is exotic and invasive, often excluding native plants as it successfully colonizes new locations. On the other hand, it is fire and drought resistant and provides food and shelter for many species of birds and small mammals (Tesky 1992). The enormous biomass of Russian-olive fruits apparently presents an attractive food source to many birds, including Ring-billed Gulls on occasion and, undoubtedly, is an integral part of this tree species' reproductive success. The extent to which the seed passes through a gull's digestive systems intact is unknown. Gulls may indeed contribute to dispersal of the Russian-olive seed and the fruit may indeed contribute to the gulls' nutrition, but these hypotheses have yet to be tested.

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Figure 1. A Ring-billed Gull approaching a Russian-olive tree (top frame), alighting and plucking fruit (bottom frame; video stills by Nick Komar).

NEWS FROM THE COLORADO BIRD RECORDS COMMITTEE (JANUARY 2002)

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Because the Colorado Bird Records Committee (CBRC) does not have its annual report in this issue of the Journal of the Colorado Field Ornithologists, I felt it necessary to let the members know what is happening with the Committee. While I am not yet ready to publish the results of the 2001 circulation, I can announce that we have accepted as a first state record the Slaty-backed Gull record from the Loveland area in Spring of 2000. This brings the state list up to 470 species.

The CBRC is making headway in greatly revamping how the state's review list is constructed and might have been ready to publish in this issue, if it were not for the need to make amendments to the CBRC by-laws first. These must go through, and be accepted by, the CFO Board of Directors. Additionally, submissions for 2000 records are now overdue; please submit reports as soon as possible to me at the above address. Thanks to all those that submitted records on a timely basis throughout 2001.

The new editor has allocated much space in the next issue (April 2002) for CBRC publications. These will include the report of the 2001 circulation of 2000 records, the publication of the new Committee by-laws, and the updated review list. So, look for lots of interesting news from us in the April issue!



This third-summer Glaucous-winged Gull (molting) was seen at Boyd Lake State Park, Larimer County, on 16 July 2001. Video still by Chris Wood.

NEWS FROM THE FIELD: THE SUMMER 2001 REPORT (JUNE – JULY)

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Summer, the season of picnics, fishing, gardening, camping, relaxing, butterflying, and birding. Yes, birding. While many stow away the binoculars during the heat and doldrums, others know that the summer months can bring excellent birding opportunities. The summer of 2001 was, indeed, excellent with its vast array of vagrants. Though weather in our state certainly influences the birds that reside here, it is the weather outside the state that causes birds that birders drool over to venture to more hospitable climes, at least temporarily. Vagrants can wait, however. Let's start with the birds that make Colorado home and how weather may have affected them. All weather data obtained through NOAA (2001).

Weather in western Colorado in June was quite the roller coaster. Overall, temperatures in Grand Junction were above normal and precipitation was low. A large cold front passed through the northwestern portion of the state between 2 and 4 June. The front arrived with extremely high winds as evidenced by a wind gust in Moffat County of 61 mph. Following the passing of the front on the 5th, frost settled in Fruita. Steamboat Springs and Grand Junction set new low temperature records on the 5th of 23° and 38°, respectively. Another unusually strong storm system arrived on the 12th. Strong southwest winds blew trees down in Telluride and a gust of 63 mph was recorded in Rifle. A cold front immediately followed the passage of this storm and snow levels dropped to 7000 feet with 3-5 inches of snow recorded in Telluride and Aspen. Heavy frost was evident on the morning of the 14th in many western locations. Vegetation suffered considerably from these unseasonable cold temperatures. The killing cold left many deciduous trees bare during June, the peak of breeding season for birds, and even conifers

suffered by having new growth frozen back. By the end of the month, however, many areas were approaching the 100° mark.

June 2001 was a warm month on the eastern plains for most locales. The 84.2° daily high temperature average for the month in Denver was 3.8° above normal and the highest average recorded by the National Oceanic and Atmospheric Administration's Denver station in the past 6 years of available data. For the month, at least 12 days exceeded 90° in Denver, with most of that occurring in the second and final weeks of the month. Denver recorded 98° on 30 June. Precipitation for that area was also slightly below normal. The 1.53 inches recorded is 0.52 inches below the mean for the past six years. Colorado Springs fared better with temperatures actually falling below average for June.

Monsoonal flows are the standard in July in Colorado and 2001 was no exception. Though average temperatures were noted throughout the majority of western Colorado, rainfall was generally greater than previous years. The San Juans were exceptionally rainy during the first few days of the month. A ridge of high pressure dominated throughout the majority of the month, brewing storms on most days, except in Alamosa, which experienced below average precipitation for the month. Early July was hot, though. The mercury hit 104° in Grand Junction on Independence Day, obviously not conducive to either picnicking or birding. It was fortunate that temperatures moderated during the second week of the month.

Barring the typically cool, pleasant conditions the mountains afford during summer, lower elevation areas in Colorado are usually hot in summer. In most cases "lowland" birds are adapted to these conditions. It is drought or extreme bouts of high temperatures that can cause declines in breeding productivity, distributions, and densities. For most of us, perceptions of year-to-year abundance are dependent upon incidental observations and subsequent theories. For those employed at the Rocky Mountain Bird Observatory (RMBO), summer observations come from intense monitoring efforts designed to determine abundance. It is through their labors, and the efforts of dedicated volunteers of other survey methods (such as Breeding Bird Surveys) that substantive clues to population trends of nesting birds can be discovered. Tidbits from some of the data collected from RMBO monitoring and BBS surveys are discussed under individual species sections later in this report.

The extreme cold bout in early June certainly must have had some effect on nesting birds. When temperatures drop low enough to kill vast areas of new growth, it undoubtedly affects forage availability and cover of nesting birds. It is difficult to predict how, exactly, the cold affected montane birds. It is

possible that some nesting attempts were aborted or delayed. Both single- and multi-clutch species can be affected with either total loss of fecundity or reduced number of clutches. But many birds are extremely adaptable and still may have been able to reproduce. In northeastern North America, periods of heavy tent caterpillar and armyworm infestation can virtually denude forests of leaves, yet Red-eyed Vireos continue to sing daily from bare treetops. Over the short term, nesting success may be reduced due to increased predation and parasitism, but this is only a temporary event. Such may be the case with the heavy freeze of Summer 2001.

There was undoubtedly some weather event in the Gulf Coast and southwest regions that prompted birds from those areas to travel north to Colorado this summer. Without a doubt, the bird of the season was the first state-record Black Skimmer at Jet Lake, Kiowa County, in July! Other birds with Gulf-coastal affinities found in Colorado this summer included Neotropic Cormorant, Tricolored Heron, the state's sixth Reddish Egret (a holdover from spring), a state fourth White Ibis, possible Mottled Duck(s), and Laughing Gull. Southwestern birds also made an appearance, albeit, much less significant. A state fifth Common Black-Hawk was found in Montrose and a Lesser Nighthawk, a species that might nest in the state, was seen as well. But for all those vagrant species that preferred to head north for the summer, there were many northern species that opted to bask in the Colorado sun. One can only wonder why species such as Pacific Loon, Pomarine Jaeger, Glaucous-winged Gull, and Arctic Tern "sunbirded" in the state. Summering Arctic Terns were also found this year in Illinois and Ontario.

Rich Levad's discovery of over 30 Black Terns displaying breeding behavior in the San Luis Valley is very encouraging for a species that has been predicted to become extirpated as a nester in the state in the near future.

And let us not forget those wayward warblers. Though spring and fall are known as times to scour the riparian groves, summer can indeed provide rewarding results as well. Spring lingering into summer was indicative of detections of Gray-cheeked Thrush and eastern warblers such as Blue-winged, Golden-winged, Tennessee, Chestnut-sided, Magnolia, Prairie, Blackpoll, Kentucky, and Hooded.

Congratulations to Brandon Percival and Van Truan for diligently attempting to assess the population of Black Rails in the Arkansas Valley. The 73 birds detected during one evening (including a first Pueblo County record), obviously nominates Colorado as one of the premier states to find this species. The Colorado densities are truly astounding considering that the species is

considered very rare or uncommon in inland locations. Piping Plovers had an astounding reproductive year. Through the diligent research and conservation efforts of Duane Nelson, Colorado's population offers a significant contribution to the future preservation of this rare species.

We thank the 48 contributors who submitted observations for the summer season. These contributors mark the highest number of contributors for the summer season since at least the early 1990s, and possibly ever. Let us keep up the good work and continue this trend. No observation reported is too mundane and all have been used for this analysis, though only specific highlights were noted in this report. As always, the authenticity of observations of all underlined species is dependent upon acceptance by the Colorado Bird Records Committee before inclusion to the official state list of records. Special thanks go to Brandon Percival and Tony Leukering for critical review of earlier versions of this seasonal report.

Notes: County names are italicized. Species for which documentation is requested by the CBRC are underlined. A&R = Andrews and Righter (1992); alternate = alternate (breeding) plumage; basic = basic (winter) plumage; BOP = beginning of the period (1 June); CBBA = Colorado Breeding Bird Atlas; CVCG = Crow Valley Campground; NWR = National Wildlife Refuge; EOP = end of period (31 July); m.ob. = many observers; MCB = *Monitoring Colorado's Birds* (a RMBO program); RMBO = Rocky Mountain Bird Observatory; SCL = Strauss Cabin Lake, *Larimer*; SP = State Park; SRA = State Recreation Area; SWA = State Wildlife Area; W.T.P = wastewater treatment plant.

Pacific Loon: Reinforcing the thought that we ought to look carefully at *all* summering loons, a basic adult Pacific Loon was present at SCL from 16 June - EOP (NK, m.ob.).

Common Loon: Three Common Loons were seen in Colorado this summer, including a first-summer at Connected Lakes in Grand Junction, *Mesa*, 3 June - 1 July (Larry Arnold), which was later at the Colorado River Wildlife Area in Grand Jct., *Mesa*, 9 - 10 July (Dave Wright). Two others were at Trinidad Lake, *Las Animas*, 8 July (NG).

Neotropical Cormorant: An adult was reported from Windsor Lake, *Weld*, on 27 June (AS).

Double-crested Cormorant: One was at Dinosaur National Monument, *Moffat*, 9 June (CD, BW, GG, LC). A&R list no summer records for *Moffat*, while the CBBA lists only one possible breeding location in central *Moffat*.

Great Egret: MCB volunteers surveying Boulder Creek found only four nests.

The Longmont colony discovered in 2000 hosted six active nests, up from one in 2000 (MCB). Non-breeders were observed at Milton Reservoir (RO) and flying over Tamarack Ranch SWA, *Logan*, on 14 June (DF). Once again, several were seen along the Arkansas River Valley including up to four birds at John Martin Reservoir, *Bent* (m.ob.), four at Dye Reservoir on 4 July (TL, NG) and one at Two Buttes Reservoir 4 July (JB). Nesting should be watched for in the Arkansas River Valley.

Tricolored Heron: An adult was seen (NK, DAL, m.ob.) and videotaped (RH) at SCL, 17-22 June.

Reddish Egret: This Spring's subadult, white-morph Reddish Egret was re-found and seen by many at Neenoshe Res., *Kiowa*, 5 July - EOP (DN, CLW video, m.ob.).

Green Heron: Single adults were reported from six locales this summer and included birds at Riverbend Ponds in Ft. Collins, *Larimer*, 16 June (NK) and the Las Animas Fish Hatchery, *Bent*, on 15 July (TL, NG).

White Ibis: An adult remained briefly at John Martin Reservoir on 1-2 June (TD, DJ, DN, CL). We strongly encourage documentation, additional to that already received for this record, be submitted to the CBRC as soon as possible.

Snow Goose: Several were found in southeastern Colorado this summer. Whether this "increase" was due to better coverage, more people submitting their reports, or a real increase in the number of summering birds is anyone's guess. Seven, including at least two blue morphs, remained at La Junta City Park through the summer (TL) while up to eight were seen throughout the summer at the so-called Indian Reservoirs in *Kiowa*. Singles were at Huerfano Lake, *Pueblo*, 10 June (TL, NG); L. Hasty, *Bent*, 11 June (SJD); and Thurston Res., *Prowers*, 15 June - 22 July (BKP, m.obs.).

Ross's Goose: Quite unusual for summer was a white-morph individual along the Goodnight Ave. trail, *Pueblo*, on 14 July (TL, NG) and re-found at Pueblo City Park, *Pueblo*, 22 July (MY).

Wood Duck: Unusual locations for summering birds included single males at Lathrop SP, *Huerfano*, 15 June (NG) and at the Springfield sewage ponds, *Baca*, 11 July (TL, NG).

Mottled Ducks or hybrids: Two dark dabbling ducks were found at Rocky Ford W.T.P., *Otero*, 2 July (DF, JB). One seen between 3 - 5 July was thought to be a hybrid Mottled x Mallard (TL, MJ), while one on 4 July may have been a pure Mottled Duck or a different hybrid, as it didn't have white in the tail (BKP). There are no accepted records for Mottled Duck in Colorado. Any candidate Mottled Duck in Colorado

should be photographed and/or videotaped.

Northern Pintail: A female with a brood of seven was at Hugo SWA, *Lincoln*, on 6 July (NG).

Redhead: Huerfano Lake, *Pueblo*, hosted 29 males and four females 10 June (TL, NG), eight were at SCL on 19 June (LS), five males and two females were at Box Spring, northern *Crowley*, on 6 July (NG), and one pair was at the Springfield sewage ponds, *Baca*, on 11 July (TL, NG).

Ring-necked Duck: A male was at SCL on 13 June (SJD).

Greater Scaup: A male was at Orlando Res., *Huerfano*, on 9 June (TL, NG).

Lesser Scaup: Lesser Scaup at unusual locations included a pair at a small pond near CRs 88 & 45, *Weld*, on 7 June (TL, NG), four males and one female at Luna Res., *Weld* (southeast of Erie), on 1 July (TL), and a male at Dye Res., *Otero*, on 4 July (TL, NG).

Bufflehead: A single male was at Cucharas Res., *Huerfano*, on 9 June (TL, NG). Up to two females were at SCL on 13 June-11 July (SJD, NK, LS).

Hooded Merganser: Two first-spring males were at Ft. Collins, *Larimer*, 1 June (DAL), while a female was at SCL, 18 June (SJD). Two females were at Huerfano Res., *Pueblo*, 28 July (CLW, BKP).

Common Merganser: An adult female with a large brood (>nine young) was in the St. Charles River canyon, *Pueblo*, on 27 June (TL, NG).

Common Black-Hawk: An adult east of Montrose, *Montrose*, on 9 June (SJD) was the third report for 2001. If all are accepted by the CBRC, this will be only the fifth Colorado record. Should the person taking digital pictures of the individual found at Trinidad Lake in May read this, please send any resultant images to the authors or to the CBRC.

Broad-winged Hawk: A single juvenile was at Flagler SWA, *Kit Carson*, 1 June (CLW).

Peregrine Falcon: Summer reports included individual adults at Adobe Creek Res., *Kiowa/Bent*, on 4 July (TL, NG); Barr Lake, *Adams*, on 23 July (TL, JB); and Chico Basin Ranch, *El Paso*, on 27 July (Stacey Scott).

Merlin: An adult (subspecies?-Eds) was seen by an experienced observer on Black Mountain, *Hinsdale*, on 21 June (PO).

Black Rail: A nocturnal survey of several marshes tallied 73 Black Rails in the Arkansas River valley from *Bent* west to *Pueblo* on 22-23 June (VAT, BKP) and included *Pueblo*'s first, near Avondale, 23 June (VAT, BKP).

American Coot: One was at Hugo SWA, *Lincoln*, on 6 July (NG); two were at Springfield sewage ponds, *Baca*, on 11 July (TL, NG).

Sandhill Crane: Four (2 ad., 2 fledglings; filmed) were at Glendevey, *Larimer*, 24 June (NK) for a first documented breeding in *Larimer*.

Black-bellied Plover: An alternate bird remained at John Martin Reservoir

until 3 June (BKP).

American Golden-Plover: Very late, and a very rare spring migrant in Colorado, was a molting bird at CR32 and CR9, *Larimer*, 1 June (NK).

Piping Plover: “Colorado’s Piping Plover Population rebounded from 1 pair in 1998 to five pairs in 2001. Three pairs ... fledged seven young, the best year since 1997. The female was a banded bird, and I don’t band plovers, so it was a recruit from another state. The band combination was dark blue above the “knee” on the left leg, and silver (USFWS) at the foot on the right leg. Our population, once considered “peripheral” is connected to other populations, demonstrating the importance of this population as part of a larger whole” (DN).

Mountain Plover: 100+ birds were found staging at Jet Lake, *Kiowa* on 22 July (TL,LS).

Black-necked Stilt: Four were at a pond near Model, *Las Animas*, on 10 July (TL,NG).

Solitary Sandpiper: One adult was present at Walden Res., *Jackson*, on 7 July (TL).

Greater Yellowlegs: Three were at Redvale, *Montrose*, 16 July (CD, BW).

Willet: Willets on 28 June and 2 July (NK) at SCL were almost certainly southbound migrants. It is less obvious what direction a Willet observed at SCL on 3 June (NK) was heading. Five were at Miramonte Res., *San Miguel*, 26 June (CD, BW). The annual MCB Willet census turned up 103 individuals in North Park, 3 in *Routt*, and 2 at Fruitgrowers Res., *Delta* (GG).

Upland Sandpiper: An early migrant was at CR C (*Kiowa*, s. of Neesopah Res.), 22 July (NK,LS).

Long-billed Curlew: One at Blue Mesa Res., *Gunnison*, 16 June (DF), was an early southbound migrant, and three were at Cucharas Res., *Huerfano*, on 25 July (TL,NG).

Marbled Godwit: Seven were present at SCL on 19 June (NK); 38 were at SCL, *Larimer*, 26 June (NK); and nine graced Miramonte Res., *San Miguel*, 26 June (CD, BW).

Ruddy Turnstone: A single adult was at Adobe Creek Res., *Bent*, 29 July (CLW,BKP).

Least Sandpiper: Two fall migrants were at Redvale, *Montrose*, 16 July (CD, BW).

White-rumped Sandpiper: Late spring lingerers included 15 at Neenoshe Res., *Kiowa*, on 15 June (BKP); three at Upper Queens Res., *Kiowa*, 15 June (BKP); one at Red Lion SWA, *Logan*, 17 June (SJD); and four at SCL, 19 June (NK).

Red-necked Phalarope: The last northbound migrants were seen at Rocky Ford W.T.P., *Otero*, 1 June (BKP).

Pomarine Jaeger: This species appeared in Colorado for the third consecutive summer. This year's bird was an adult light morph (lacking tail streamers) at Upper Queens Res., *Kiowa*, found in late June by an out-of-state birder and re-found 3 July (DF, JB) and 10 July (TL, NG).

Laughing Gull: An adult at Adobe Creek Res. was seen depredating Least Tern nests in mid-June (DN). This, or another adult, was at Jet Lake and Neegronda Res., *Kiowa*, 19-29 July (DN, m.ob.).

Franklin's Gull: In excess of 80 adults and nine dependent young were at Walden NWR, *Jackson*, on 7 July (DF, RL). This is the 3rd year in a row the species has bred here, the only known breeding location in the state.

California Gull: Up to 300 were at SCL, *Larimer*, in early summer (NK), many apparently attempting to nest. By 9 June, all nests had been abandoned (NK).

Herring Gull: Very unusual in summer, an adult in alternate was at John Martin Reservoir, 3 June (BKP) and a third-alternate bird was at Pueblo Res., 24 July (BKP).

Glaucous-winged Gull: A molting 3rd-summer bird was at Boyd Lake SP, *Larimer*, 16 July (DF, CLW video, TL, NG). There is only one previous summer record for the state, the first state record in July 1981.

Great Black-backed Gull: "An adult was seen over the spring at John Martin Res., where it courted a California Gull, then at Adobe Creek Res., where it courted a California Gull, then alone on the south beach at John Martin Res., then up to Neenoshe Res., where I saw it on 5 July. This gull then alternated between Jet L., Neenoshe Res., and Upper Queens Res. through the end of the period. I saw it at a total of 5 reservoirs up to 40 miles distant from one-another" (DN, m.ob.).

Caspian Tern: Two adults were present at John Martin Res., 3 June (BKP) and up to 14 adults stayed at SCL, 3 June-17 July (NK, DAL, m.ob.).

Common Tern: One adult was reported from SCL, 18 June (AS).

Arctic Tern: One adult was observed at SCL, 17-18 June (SJD, m.ob.). Another adult was at Windsor Lake, *Weld*, 23-27 June (SJD, m.ob.). Finally, one adult was observed and photographed at Bonny Res., *Yuma*, 1 July (LS). Due to the extreme rarity of this species in the state, and the very odd time of year of these records, one wonders whether just one bird was wandering the plains of Colorado, as none of the dates overlap. The CBRC will have to weigh this one carefully.

Least Tern: "Least Terns are apparently acting as a source for other populations. Despite four consecutive years with high reproductive success, our population dropped from 33 pairs in 1998 to 25 in 1999,

19 in 2000 and 20 pairs in 2001. 31 young fledged in 2001 (DN)". An unusual report of Least Tern was of an adult at SCL, 25 June (SJD).

Black Tern: "I saw 32 Black Terns at two sites south of Alamosa, 20 July. They were definitely nesting--carrying food and defensive reaction to intruders. Largest number of these found since RMBO began colony counts in 1998" (RL).

Black Skimmer: Duane Nelson found Colorado's 1st state record of this species, an adult at Jet Lake, *Kiowa*, 19-21 July (DN, m.ob.). About 20 lucky people saw the bird.

Eurasian Collared-Dove: Interesting sightings of this species included one at Agate, *Elbert*, 31 May (DF); one at Montrose, 9 June (SJD); one at Pueblo, 11 June (SJD); one at Hugo, *Lincoln*, 11 June (SJD); one at Brighton, *Adams*, 12 June (DF)--(two seen by John Hall at his house in Brighton for 10 days prior); four at Walsh, *Baca*, on 11 July (TL, NG); five+ in Cañon City, *Fremont*, 15 July (RS); and one at Flagler, *Kit Carson*, 22 July (DAL).

White-winged Dove: A pair lingered from spring in Pueblo, *Pueblo*, until 6 June (VAT, BKP, m.ob.).

Inca Dove: One was at Rocky Ford, *Otero*, in mid-July and on 20 July (RS, TL, NG).

Black-billed Cuckoo: One was at the Environmental Learning Center, Fort Collins, *Larimer*, 10 June (NK) and one was at Chatfield Res., *Jefferson*, 28 July (AS, JK).

Yellow-billed Cuckoo: Out-of-the-ordinary records this summer included one singing male at Grand Jct., *Mesa*, 8 June (CD, BW); one in Wildhorse, *Cheyenne*, 1 July and one in Kit Carson, *Cheyenne* (LS) on 2 July; one singing bird at Burchfield SWA, *Baca*, on 11 July (TL, NG); and one in *Kiowa* on 22 July (LS).

Owls: "I did hear that the Grand Mesa nest boxes had 9 Boreals, 5 Flammulateds, and 4 N. Saw-whets this year. I actually checked the Uncompahgre boxes and found the 5 Flammulateds and 2 N. Saw-whets" (RL).

Western Screech-Owl: Two adults with one fledgling were at Green River Campground in Dinosaur National Monument, *Moffat*, on 12 June (CD, BW, GG, LC).

Burrowing Owl: Several were at Dinosaur National Monument, *Moffat*, on 10 June (CD, BW, GG, LC).

Lesser Nighthawk: One male was 0.5 miles south of Billy Creek SWA, *Ouray*, 23 July (DF, CLW).

Common Poorwill: Several were calling on the Flattops near Coffee Pot Campground at 10,500 feet, 20 June (RL), a nice high-elevation record.

Black Swift: RMBO field techs located 18 new Black Swift colonies (fide RL),

most by Beason. One to two Black Swifts were found in the Rye area, *Pueblo*, throughout July (DS, m.ob.). They must be nesting somewhere in the Wet Mountains.

***Chaetura* Swift:** One was found with Violet-green Swallows near Ridgway, *Ouray*, in July (CC).

Broad-tailed Hummingbird: One female was at Lower Latham Res., *Weld*, on 21 July (Louise Zemaitis, m.ob.).

Rufous Hummingbird: Two adult males were along Hermosa Creek north of Durango, *La Plata*, on 5 July (CS), just about right on time for fall arrivals.

Acorn Woodpecker: Two were found west of Pagosa Springs, *Archuleta*, 10 June (SJD). If accepted the record would be the first on the West Slope away from the known Durango colony.

Purple Martin: RMBO field techs located more than 100 Purple Martin nests in western Colorado (fide RL).

Eastern Wood-Pewee: One was singing at Morrison Park, *Jefferson*, 5 June (AS, KS) and another singer enlivened Tamarack Ranch SWA, *Logan*, 14 June (DF).

Alder Flycatcher: A singing male was along the South Platte south of Ft. Lupton, *Weld*, on 4 June (CLW, TL). This date is not atypical for this late spring migrant.

Willow Flycatcher: One was along the Green River at border of Dinosaur National Monument and Brown's Park NWR in early June (CD, BW, GG, LC).

Least Flycatcher: One was singing at Big Sandy Creek, south of Kit Carson, *Cheyenne*, 1 July (LS). Others were again present this summer at Chatfield Reservoir, *Jefferson*.

Black Phoebe: One pair was at the St. Charles River canyon, *Pueblo*, from spring to at least 27 June (TL). "This summer we found birds at 41 locations and recorded 27 nesting pairs along the San Miguel River in *Montrose*, Dolores River in *San Miguel*, and Colorado River in *Garfield*. Black Phoebe is fairly common from Naturita on the San Miguel River until its confluence with the Dolores River. The range expansion of this species should be considered the story of the decade (90s) in Colorado" (CD, BW).

Eastern Phoebe: One pair nested on the St. Charles below the canyon, *Pueblo*, from spring to at least 27 June (with ready-to-fledge nestlings on the latter date) (TL, m.ob.); there were no other birds in the canyon this year after there were 2.5 pairs in 2000 (TL). One was seen just below Antero Res., *Park*, 2 July (RL), probably providing a first county record. A nesting pair was found again in Colorado City, *Pueblo* (DS).

Vermilion Flycatcher: Higbee Cemetery, *Otero*, was again the site for this species. The reports this season included a male and a female, 1 June (BKP); two males and one female, 3 June (BKP); one male, 6 June (BKP, CLW); one pair courting, 11 June (SJD); two males and at least one female, 14 June (Tom Shane); and an immature, 20 July (RS).

Great Crested Flycatcher: One singing bird was along Santa Clara Creek west of I-25 in southern *Huerfano* on 23 June (TL). One was also at Bent's Old Fort, *Otero*, 3 July (DF, JB).

Scissor-tailed Flycatcher: One adult female was three miles west of Last Chance, *Washington*, on 24 June (Dave Rubenstein, photograph)

Red-eyed Vireo: One singing male was three miles south of Olathe along the Uncompahgre River, *Montrose*, 1 June (CD, BW). Lake Holbrook, *Otero*, was the site of several sightings this summer: three birds including two singing males, 1 June (BKP); one pair, 6 June (BKP, CLW); and one singing male, 15 June (BKP). One was also singing at Castlewood Canyon SP, *Douglas*, 24 June (LS).

Canyon Wren: One pair nested in the St. Charles River canyon, *Pueblo* (TL, NG).

Winter Wren: One was at Rocky Mountain National Park, *Boulder*, 22-29 July (Hector Galbraith, GW, Maggie Boswell, tape recording submitted to CBRC).

Eastern Bluebird: Three pairs were at Flagler SWA, *Kit Carson*, 1-3 June (CLW).

Veery: Singing birds were found in numerous little-known locations by RMBO staff this summer, including one just west of Sargents, *Gunnison*, 14 June (JB); seven along Trout Creek, *Routt*, on 17 June (CC); three in Left Hand Canyon east of Ward, *Boulder*, on 22 June (TL); two in Huerfano SWA, *Huerfano*, on 7 July (NG); and one along the Conejos River west of Fox Creek, *Conejos*, on 11 July (JB).

Gray-cheeked Thrush: One was seen at Flagler SWA, *Kit Carson*, 1 June (CLW).

Gray Catbird: RMBO staff also found Gray Catbirds at previously unknown locations. One singing bird was detected on the Rio Grande north of Del Norte, *Rio Grande*, on 4 June (JB); two were singing at Devil Creek SWA, west of Pagosa Springs, *Archuleta* on 11 June (JB); one was singing at Salida, *Chaffee*, on 12 June (JB); and one was along the Crystal River, in southern *Pitkin*, on 18 July (TL, NG).

Cedar Waxwing: One was near Home Lake SWA, *Rio Grande*, on 31 May (JB); one was just south of Eagle, *Eagle*, on 7 July (Dan Derbyshire); and two were at Cuchara, *Huerfano*, on 25 July (Ren Gobris, TL, NG).

Blue-winged Warbler: One male was at Colorado City, *Pueblo*, 1 July (BKP).

Golden-winged Warbler: A lovely singing male was at Red Rocks Park,

Jefferson, 5-7 June (NG, TL, CLW video, m.ob.). Despite his best efforts, no female appeared to be drawn to his very much off-the-beaten-track territory.

Tennessee Warbler: One singing male was at Ft. Collins, *Larimer*, 4 June (DAL).

Orange-crowned Warbler: Singing birds were very numerous west and south of La Veta, *Huerfano* (including to treeline on Trinchera Peak) and in northwestern *Las Animas* all summer (TL, NG). Two singing on territory on the Laramie River Road south of Glendevvey, *Larimer*, 24 June (NK) were at an unusual location.

Chestnut-sided Warbler: One first-spring male was at Pass Creek, roughly 5 miles north of La Veta Pass (road to Gardner), *Huerfano*, 6 June (DAL). Another male was at Colorado City, *Pueblo*, 8 June (DS) and a third was molting into basic at Apex Trail, *Jefferson*, 22 July (DF).

Magnolia Warbler: One was at Crow Valley Campground, *Weld*, 4 June (CLW, TL).

Townsend's Warbler: One early migrant was in the mountains near Cañon City, *Fremont*, 31 July (AV).

Prairie Warbler: One singing male was at Apex Trail, *Jefferson*, 21 July (CLW).

Blackpoll Warbler: One male was singing at Dearlodge Park, *Moffat*, on 9 June (CD, BW, GG, LC), providing a first county record.

Black-and-white Warbler: One male was at Rye, *Pueblo*, 9 June (DS); one singing male was at Castlewood Canyon SP, *Douglas*, 24 June (LS) at the same locale as in summer 2000; and a female was west of Ft. Collins on Stove Prairie Rd., *Larimer*, 9 July (BKP, DB, m.ob.).

Hooded Warbler: A singing male was found at Lone Dome SWA, *Dolores*, 9 June (PO).

American Redstart: One female at Monte Vista NWR, *Rio Grande*, on 31 May (JB); one singing male was at Colorado City, *Pueblo*, 26 June (BKP).

Ovenbird: One singing male at Rye Mountain Park, *Pueblo*, 26 June (BKP); two singing males above Beulah, *Pueblo*, 27 June (BKP); and one singing male in Wet Mountains in *Huerfano*, 29 June (BKP).

Kentucky Warbler: One singing male was at Colorado City, *Pueblo*, 29 June (BKP, SC, DS).

Summer Tanager: One first-spring male was seen at Sawhill Ponds in Boulder 24 June (MP).

Cassin's Sparrow: Multiple singing birds were near Sterling, *Logan*, 14 June (DF), all the more surprising as this was not a big Cassin's year in the state, so birds from extreme northeastern Colorado are of note.

Lark Bunting: One immature male or female at SCL, 20 June (DAL) was at an interesting location. A male in *Saguache*, 1 July (NK) was also a

surprise.

Brewer's Sparrow: Many were present (along with two active nests) northeast of Lake Maria, *Huerfano*, on 18 June (TL).

Sage Sparrow: A nest was found on Flat Top Mountain on 6 June (John Rawinski, ph.) providing a possible first nesting record for *Conejos*. Seven were reported from eastern *Conejos*, 1 July (NK).

Savannah Sparrow: One heard at SCL, 20 June (DAL), was at an interesting location. "On July 17, I saw a Savannah Sparrow near an alpine lake at 11,920 feet. On July 18, I saw 2 Savannah Sparrows at another lake @ 11,800 feet. (The 2 areas were slightly more than 2 miles from each other.) The birds were seen in the South San Juan Wilderness Area, ~5 miles south of Platoro Reservoir in *Conejos* County" (SA).

Song Sparrow: Two singing birds were in tamarisk near Lake Maria, *Huerfano*, on 18 June (TL). Since this species does not breed along the Arkansas River, except sparingly, it is surprising to find territorial birds in such a situation in southeastern Colorado.

Northern Cardinal: Three reports, all of males, were of one singing at Tamarack Ranch SWA, *Logan*, 14 June (DF); one singing at Rocky Ford, *Otero*, 28 July (CLW, BKP); and one at Lamar, *Prowers*, through the season (DAL).

Rose-breasted Grosbeak: One male was singing at Welchester Park, *Jefferson*, 3 June (Michele Bloom); one male was at Vail, *Eagle*, 10-11 June (Bob Righter); and one adult male was along the South Platte near Snyder, *Morgan*, 9 July (DF, David Hanni).

Black-headed Grosbeak: One nest-building female was on the plains near Agate, *Elbert*, 31 May (DF).

Indigo Bunting: One male was at 9370' in Wet Mts., *Custer*, 26 June (BKP); one singing male was at Rye, *Pueblo*, 26 June (BKP); and one singing male was at Avondale, *Pueblo*, 15 July (BKP, m.ob.).

Lazuli x Indigo Bunting: One was singing at Devil Creek SWA, *Archuleta*, on 21 June (JB) and one singing male was near the Santa Clara Cr west of I-25, *Huerfano*, 23-26 June (TL, NG).

Bobolink: One displaying male was at La Veta, *Huerfano*, on 28 June (TL, NG), for a very odd record. However, local birders report previous sightings in the area.

Great-tailed Grackle: Four were at CR80 just southeast of Park Creek Res., *Larimer*, 7 June (RK). This location is far north in *Larimer*.

Scott's Oriole: One male and one female were found on the Ninaview Breeding Bird Survey route, *Las Animas*, 6 June (CLW, BKP). This is the second consecutive year that the species has been tallied on this route by Wood.

White-winged Crossbill: One pair was six miles northeast of Rico, *Dolores*, on

4 July (CD, BW).

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This sub-adult white morph Reddish Egret (next to Great Egret) was seen sporadically during the spring and summer 2001. Photo by Chris Wood.