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THE BIRDS OF EL PASO COUNTY,
COLORADO

BY
OWEN A. KNORR

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INSTRUCTOR IN BIOLOGY
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INTRODUCTION

There are few areas in the Rocky Mountain West where thorough, intensive ornithological investigations were carried out at a very early date. By virtue of the early explorations passing through this region and the residence of an outstanding pioneer ornithologist, the County of El Paso, Colorado, is such a place. This circumstance presents an admirable opportunity to compare the avifauna as it existed in the early days with what we know of it today, to note the dramatic changes which have occurred, and to attempt to explain these changes. However, El Paso County is of exceptional interest from another standpoint. A number of bird faunas with various geographic affinities meet here, with eastern and western forms mixing with purely boreal and desert forms, so that it is entirely possible to study nesting Rosy Finches in the morning and nesting Roadrunners in the afternoon. The present study attempts, by means of an annotated species list reflecting the current status of El Paso County birds, to analyze the changes which have occurred during the past 60 or more years and to discuss the mingling of the various avifaunal elements in this region.

HISTORICAL

Aiken and Warren (1914) stated that the first ornithologist to visit the area now known as El Paso County was Dr. J. A. Allen in 1871. This statement is true only if we object to calling Thomas Say an ornithologist, since Say passed through in 1820. While he was better known as an entomologist, like many of our early naturalists his zoological interests were broad, and most historians agree that he was entirely competent in the field of ornithology. Indeed, Cooke (1897) preferred to call him a "trained ornithologist". But there is an even earlier reference to the birds of this region than Say's report. Pike (1810), in his attempt to scale the peak which now bears his name in 1806, mentions seeing a "Pheasant" in the high country forest, an obvious allusion to the bird we now call the Dusky Grouse. This record is the first published on the birds of this area.

On July 11, 1820, Major Stephen Long and his exploring party crossed over the divide between the Platte and Arkansas river drainages and entered the County at what is now Palmer Lake. Thomas Say was the zoologist for the expedition. They proceeded south along the foothills and camped on the Fountain River near present-day Colorado Springs the following day. Edwin James, surgeon, botanist, and historian for the party, made the first ascent of Pikes Peak from this point with several companions, actually reaching the summit on the 14th of July, and thereby became the first to climb any 14,000-foot peak in North America

and the first to describe the tundra he found there. Meanwhile, Say went upstream to the vicinity of "Boiling Spring", which is known today as the town of Manitou Springs, and collected the House Finch and the Arkansas Goldfinch, the first specimens to be taken and upon which the first descriptions were based. An interesting list of the birds encountered along the Fountain is included in Say's notes in James' account (1823) and will be commented on at some length below. The party then followed the river south toward its confluence with the Arkansas, leaving the County at the present site of Midway.

Charles Edward Howard Aiken came to Colorado Springs from Chicago in October of 1871 and settled on a ranch on Turkey Creek, 18 miles southwest of the recently established town. He began studying and collecting birds in the vicinity during the first two years, and the results of his early work were published in the Proceedings of the Boston Society of Natural History (Aiken and Holden, 1872), having been edited by Dr. T. M. Brewer. In 1874, he joined the Henshaw group of the Wheeler Surveys as an ornithologist and with Henshaw made large collections from Colorado Springs south into the San Luis Valley. The specimens were sent to the Smithsonian Institution and reported on by Henshaw (1875). Not long after, Aiken moved into town and opened a taxidermy shop, which, except for some brief absences, he operated almost until his death in 1936. This line of endeavor afforded him an exceptional opportunity to appraise accurately the local bird fauna, since many of the local hunters brought their specimens to him for preparation.

About the same time that Aiken arrived in the Colorado Springs area, the Museum of Comparative Zoology at Harvard sent an expedition to Colorado accompanied by Dr. J. A. Allen, the curator of birds. He collected extensively along the foothills from Palmer Lake to Colorado Springs and in 1872 published the first local list for the County. Although Aiken's local list (*op. cit.*) antedated Allen's, the latter was able to publish his a few months earlier.

H. D. Minot of Boston was the next investigator to visit the region. He spent part of the summer of 1879 in the County and contributed some notes of value from the mountains west of Colorado Springs (Minot, 1880).

In 1882, J. A. Allen returned to Colorado Springs, this time with William Brewster, another distinguished American ornithologist from Cambridge. The latter made the trip primarily for his health. They spent the months of March, April, and May collecting in the immediate vicinity of Colorado Springs and contributed some important material, including the only Colorado record for a very unlikely bird, the Florida Gallinule (Allen and Brewster, 1883).

Edward Royal Warren came to Colorado Springs in 1881 and from 1882 to 1884 did considerable collecting of birds. Owing to his absences from the region and his preoccupation with his collections and publications of mammals, he did not

resume his ornithological investigations until about 1900. From that time until five years before his death in 1942, he observed and collected fairly steadily. He published a number of titles on Colorado birds, many containing references to El Paso County birds, and in 1914, with Aiken, he published *The Birds of El Paso County, Colorado*, the only complete, annotated list of the birds of the County. Aiken is the senior author, but Warren did most of the writing, using the Aiken Collection as his primary source. This publication was very important, not only for the County, but for the State, since it set forth the status of all the birds of a circumscribed area as known at that time and was based on the best collection in the State.

Will C. Ferrill became curator of the Colorado State Historical and Natural History Society in 1896 and continued in this capacity until 1910. During this period he was closely associated with Horace G. Smith, pioneer Denver ornithologist, with whom he made collecting trips to various parts of the State. These two did some work in the County and added to the County list.

At the urging of General William Jackson Palmer, who was the founder of the city of Colorado Springs, William Lutley Sclater came to Colorado Springs in 1906 to become Director of the Museum at Colorado College. He was an accomplished British ornithologist, one of the editors of the British ornithological journal, the *Ibis*, and the son of the noted British ornithologist and biogeographer, Philip Lutley Sclater. He retained this position until 1909, and through his efforts the magnificent Aiken Collection of about 7,000 skins was purchased for the Museum in 1907. General Palmer provided the funds. During Sclater's tenure, he wrote the monumental *A History of the Birds of Colorado*, published in 1912, a compilation of everything known about Colorado birds up to that time. However, he did little or no field work while in Colorado.

In 1938, Samuel W. Gadd came to Colorado Springs from Pennsylvania with his family, since his father had taken a position as one of the deans of Colorado College. This young high-school student was an enthusiastic amateur ornithologist who spent a great deal of time afield in the County and kept excellent field notes. He was highly regarded by Dr. Warren, for whom he did the taxonomic revision of the second edition of Warren's *Mammals of Colorado*. Warren later presented young Sam with several bird books, including the copy of Sclater's book which Sclater himself had given him. Gadd published several notes on the birds of El Paso County prior to World War II, and I have drawn freely upon his unpublished field notes, which he very kindly prepared for this purpose.

In 1945, Louise Hering (1948) did a breeding-bird population study of a 75 acre tract in the Black Forest, an almost pure stand of yellow pine northeast of Colorado Springs. Because of its nature, this paper added little knowledge of the status of El Paso County birds as set forth by Aiken and Warren (*op. cit.*) with

one possible exception. She referred to the Calaveras Warbler in a list of those species "infrequently seen on the study tract and whose status in the Black Forest was not determined." The statement implies that this species was observed on more than one occasion, a fact of considerable significance since it is the first record for the County and the third record for the State. However, it might have been a case of misidentification. Unfortunately, no specimens were secured.

My first contact with the birds of El Paso County was rather indirect and occurred about two years after my arrival in Colorado in 1937. Dr. Harry Bergtold, editor of the Rocky Mountain section of "The Season", a part of the ornithological publication *Bird-lore*, had died recently. With John F. Mann, another transplanted Eastern ornithologist, who was living in Golden, I proposed resuming this work which had been discontinued, and the proposal was accepted. Thereupon, I commenced corresponding with all the persons in the region known to have done or be doing ornithological field work. Among them were Dr. Warren, Samuel Gadd, and several other persons in Colorado Springs. They sent me some interesting material on El Paso County birds which was to be used in our reports to "The Season" and had not been published previously. Unfortunately, military service in 1940 brought our project to an untimely end. However, I retained all our notes and correspondence, and those pertaining to El Paso County are incorporated into this study.

After leaving military service in 1947, I returned to Colorado Springs and did four years of intensive field work in the County which is described in more detail below. The summer of 1955 was devoted to field work in the more remote portions of the County, and during the fall and winter of 1955-1956 a number of trips were made to Colorado Springs to examine the Aiken collection. By this time the great changes which had taken place in the avifauna since the early days had become apparent, and it seemed desirable to place these facts on record and to bring the annotated County list up to date. That is the main purpose of this study.

A résumé of the persons who carried on ornithological field research in the study area and of their activities follows: first, Thomas Say, then Aiken, Allen, Minot, Brewster, Ferrill, Smith, Warren, and more recently, Gadd, Hering, and myself. Of these, Aiken did by far the most work. However, as he was by nature very modest and reticent and did not care for writing, he actually published comparatively little, considering the wealth of material he had at his disposal. His colleagues and contemporaries were not so retiring. An analysis of the literature reveals that Brewer, Ridgway, Henshaw, Smith, Brewster, Hersey, and Sclater all published significant material based on Aiken's specimens, which they played no part in collecting.

ACKNOWLEDGEMENTS

I should like to take this opportunity to acknowledge the assistance given me during the years I have been engaged in this problem. In 1955, the National Science Foundation awarded me a Fellowship which made possible much of the field work, trips, research, and the actual writing of the paper. Dr. C. W. T. Penland, Professor of Botany at Colorado College, advised me on the flora of the Pike's Peak region. Dr. Robert M. Stabler, Professor of Zoology at the College, contributed some unpublished notes and made the arrangements enabling me to study the Aiken Collection. Samuel W. Gadd placed all of his field notes on El Paso County birds at my disposal and added some valuable material concerning his work with Dr. Warren at Colorado College. Finally F. Martin Brown, biologist at the Fountain Valley School, aided me by clarifying certain points regarding the early explorations.

AREA DESCRIPTION

LOCATION AND TOPOGRAPHY

El Paso County is situated just southeast of the exact center of the State and occupies approximately 2200 square miles. The southeastern three fourths of the County is rolling plains, interrupted by occasional dry creek beds and craggy outcroppings. At the western edge of the County, the plains end abruptly as the foothills of the Pike's Peak Massif begin, culminating in the peak itself at the extreme west-central edge of the County. The northern boundary runs along the backbone of the ridge known as the Arkansas Divide, which extends from the foothills far out onto the plains and separates the drainages of the South Platte River to the north and the Arkansas River to the south. The extremes in elevation run from about 5,000 feet at the south-central edge of the County to 14,110 feet at the summit of Pike's Peak. However, this latter elevation is achieved in a comparatively short distance from where the plains end, or about ten airline miles, for an 8,000-foot rise, resulting in a very rugged terrain with many picturesque canyons dissecting the eastern face of the Massif. In addition to Pike's Peak, this mountain mass is comprised of a number of subsidiary peaks ranging in elevation from 9,000 to 12,000 feet. The term *massif* has been applied to this region because of its isolation from other major mountain groups, the nearest true alpine tundra being found 50 miles to the northwest in the Park Range or 50 miles to the southwest in the Sangre de Cristo Range.

The northwestern part of the County presents a rather diverse topography as the plains merge into the Arkansas Divide. Proceeding north from Colorado Springs, the rocky outcroppings become larger and more numerous until in the

vicinity of Palmer Lake they achieve the rank of true mesas and buttes, with rolling park land between. This sort of terrain continues eastward along the Arkansas Divide until it finally fades out into true high plains near the north-eastern edge of the County. The southwestern corner of the County is a jumble of rocky draws and ridges resembling a "badlands" and seems to belong more to Arizona or New Mexico.

There are few important watercourses in the County. Fountain Creek flows down Ute Pass in a southeasterly direction, emerging from the mountains at Manitou Springs. The early trappers called this stream "La Fontaine Qui Bouille" because of the bubbling mineral springs at Manitou. From there it flows through Colorado Springs and southeasterly to join the Arkansas at Pueblo south of the County line. Monument Creek rises on the Arkansas Divide, flows south along the foothills, and joins the Fountain at Colorado Springs. Both of these streams have many tributaries which drain the adjacent mountains and plains. All of the plains streams, which are dry most of the time, flow south, southeast, or east. They all resolve themselves into four larger streams, Chico Creek, Black Squirrel Creek, Horse Creek, and Big Sandy Creek, all of which eventually flow into the Arkansas. There are a few streams which rise within the County along the Arkansas Divide and flow north into the Platte drainage, but they are of no importance.

Prior to the advent of the white man, there were no lakes on the plains in what is now El Paso County. Now there are hundreds, possibly thousands, if one takes into consideration all the farm ponds. This fact has had a considerable impact on shorebird and waterfowl distribution, as will be discussed below. There are also some major reservoirs now, whose purpose it is to impound water for irrigation. I refer to Johnson and Little Johnson Reservoirs a few miles southeast of Colorado Springs and Teller Reservoir on Turkey Creek in the southwest corner of the County. Apparently there were few if any natural lakes in the mountains. However, since Colorado Springs has become a large city, a number of reservoirs have been built on the slopes of Pike's Peak, but they are of little importance to birds because of their great elevation and because they are maintained in a rather sterile condition. There are some beaver ponds in the mountains and foothills, and along Monument Creek, which provide their particular type of habitat. Palmer Lake on the Arkansas Divide, although small, is of some importance to waterfowl attempting to migrate over the divide. A chain of artificial lakes at Fountain, south of Colorado Springs, is used by numerous migrating waterfowl and shorebirds, and is also an important breeding area.

CLIMATE

An analysis of 40 years of climatological data taken at Colorado Springs by the United States Weather Bureau reveals the following information:

<i>Temperature:</i> January average.....	30.2°F
July average.....	68.2°F
Maximum recorded.....	98.0°F
Minimum recorded.....	-27.0°F

Average last killing frost.....	May 8
Average first killing frost.....	October 3
Growing season.....	148 days

Precipitation: Monthly averages

January.....	.22 in.
February.....	.41 in.
March.....	.73 in.
April.....	1.54 in.
May.....	2.18 in.
June.....	1.67 in.
July.....	2.61 in.
August.....	2.34 in.
September.....	1.21 in.
October.....	.59 in.
November.....	.35 in.
December.....	.34 in.
Total.....	14.19 in.

These figures are for Colorado Springs. However, the great variations in elevation of the various parts of the County result in entirely different weather at other locations. For example, at Monument, which lies on the slope of the Arkansas Divide at approximately 7,000 feet, the figures are as follows:

<i>Temperature:</i> January average.....	26.9°F.
July average.....	65.7°F.
Maximum recorded.....	99.0°F.
Minimum recorded.....	-40.0°F.

Average last killing frost.....	May 25
Average first killing frost.....	September 21.
Growing season.....	119 days

Precipitation: Total amount of 19.14 inches; greatest amounts in April, May, July, and August.

It may be seen from these data that an extra 1,000 feet in altitude between Colorado Springs and Monument results in lower temperatures and higher precipitation. An even greater difference is noted if the Colorado Springs figures are compared with those of Lake Moraine which lies at 10,200 feet, just southeast of Pike's Peak.

<i>Temperature:</i>	January average	20.3°F.
	July average	53.6°F.
	Maximum recorded	85.0°F.
	Minimum recorded	-34.0°F.
	Average last killing frost	June 22
	Average first killing frost	September 5
	Growing season	75 days

Precipitation: Total amount of 24.87 inches; greatest amounts in April, July, and August.

Once again, the weather at this still greater elevation shows increased precipitation, lower monthly average temperatures, lower maxima and minima, and shorter growing season.

In general, the great majority of El Paso County exhibits a semi-arid climate with usually very low humidities. The annual number of clear days is very high and results in a high total of insolation. In the mountainous areas, increasing elevation brings a concomitant shift to a more boreal climate, true arctic-alpine conditions being attained on the summit of Pike's Peak, including higher humidities. The wide range of climates encountered in the County may be appreciated when one considers that Pueblo (just south of the County) and the summit of Pike's Peak differ in mean temperature by 35°, a difference equal to that between southern Florida and Iceland. This fact has an important bearing on the avifaunas which are present.

FLORA AND LIFE ZONES

As one proceeds from the plains to the tops of the mountains in Colorado, he passes through a succession of vegetation types, each with its dominant plants and assemblage of animals. This fact has led a number of biologists, both botanists and zoologists, to attempt to classify these altitudinal areas into arbitrary "zones". Thus Betts (1913) listed the Plains Zone, the Yellow Pine Zone, the Mountain Zone, and the Alpine Zone; Ramaley (1927) listed the Plains Zone, Foothills Zone, Montane Zone, Sub-alpine Zone, and Alpine Tundra; Daubenmire (1943) described six zones and named them according to their dominant vegetation (the paper concerned only the mountain zones and did not treat of the plains): the Scrub Oak-Mountain Mahogany Zone, the Pinyon-Juniper Zone, the Ponderosa Pine Zone, the Douglas Fir Zone, the Spruce-Fir Zone, and the Alpine Tundra Zone. These various arrangements were based on the dominant vegetation and may be very useful in certain types of ecological investigation; but for animals possessed of the great mobility of birds, I question their validity. Of the 300 or more species of birds considered in this study, not more than several dozen can be demonstrated as being absolutely "typical" or "confined to" a certain zone, and then only

during the breeding season. Much more work of the type done by Hering (*op. cit.*) on the populations of birds at different elevations needs to be done. However, in order that we may characterize the vegetation, some system of altitudinal classification will be useful, and the traditional Life Zone classification of Merriam as utilized by Cary (1911) will be followed here. The adoption of this scheme by the A. O. U. Check-List constitutes another reason for adhering to it, even though it is not entirely satisfactory when birds alone are considered.

In El Paso County, the Upper Sonoran Zone extends from the lowest elevation up to about 6,500 feet on northeast exposures and about 7,800 feet on southwest exposures. This zone is the most arid of all and includes about two thirds of the area of the County. It is comprised mainly of the high plains with the short grasses, such as *Bouteloua*, and cacti, *Yucca*, and various forbs. There are few remaining undisturbed virgin plains areas left in the County. I found one such place on the Banning-Lewis Ranch, east of Colorado Springs, which is part of an antelope range and rigidly patrolled. Dissecting the plains are numerous watercourses along which grow stands of *Salix*, *Populus*, *Acer*, *Prunus*, and *Crataegus*. Here and there the streams widen out to form marshy areas where *Typha*, *Carex*, and other semi-aquatic and aquatic plants grow. In addition to the plains, the Upper Sonoran Zone includes the Pinyon-Juniper vegetation which is typical of the very arid southwestern corner of the County. It consists of *Pinus edulis* in association with one or more types of junipers, usually *Juniperus virginiana* here. A point a few miles south of Colorado Springs represents the northernmost continuous distribution of the pinyon on the east slope of the Rockies, with the exception of a small outpost in the Fort Collins area and a few specimens in the Garden of the Gods just west of Colorado Springs. The Candelabra Cactus (*Opuntia arborescens*) also reaches its northern limit just a few miles south of the town, and it grows in association with *Artemisia* and *Chrysothamnus*.

The Transition Zone extends from 6,500 feet to 8,000 feet on northeast exposures and from 7,800 to 9,000 feet on southwest exposures. This is the Yellow Pine or Ponderosa Pine Zone of authors, and includes the Scrub Oak-Mountain Mahogany vegetation. This latter is a narrow ecotone between the coniferous forest above and the non-forested plains below, a sort of fringe around the edge. The oak component (*Quercus gambelii*) is found only from Denver southward and attains a fine development along the foothills of the County. The Mountain Mahogany (*Cercocarpus montanus*) is replaced occasionally by Skunk-brush (*Rhus trilobata*). This type of vegetation is often found far out on the plains, fringing mesas and rocky outcroppings, just below the Yellow Pine (*Pinus ponderosa*) which is the dominant tree in the zone. This pine usually grows in rather open stands with park-like glades between. Grasses of the genera *Festuca*, *Agropyron*, *Poa*, and *Muhlenbergia* grow sparsely as an understory, and occasionally

bushes of *Ribes* and *Rubus* or *Cercocarpus* are found. The pine is usually confined to the south-facing slopes, thinning out as the ridges are reached, with a few found on the north slopes. The Douglas Fir (*Pseudotsuga taxifolia*) mixes with the pine on the ridges and is the dominant tree on the more moist north-facing slopes with a more bushy undergrowth of the genera mentioned above. Along the streams in this zone, *Salix*, *Acer*, *Populus*, *Alnus*, and *Betula* are common, along with the Colorado Blue Spruce (*Picea pungens*) which follows the streams down from higher elevations, and the beautiful White Fir (*Abies concolor*) which is found in the canyon bottoms of this zone from Colorado Springs southwestward. An extension of the Transition Zone far to the east of the foothills is responsible for the forested condition of the Arkansas Divide and that pure stand of Ponderosa Pine known as the Black Forest. There are certain interesting anomalies in the vegetation of the Divide. For example, it is possible to find aspen, Ponderosa Pine, Scrub Oak, and Mountain Mahogany growing together in the same clump and representing several different zones. The Transition Zone accounts for almost all of the remaining one third of the County.

The next higher zone is the Canadian, which extends from 8,000 feet to 10,500 feet on northeast exposures and from 9,000 to 11,000 feet on southwest exposures. This zone seems to have little individuality, since it is made up largely of invaders from the zones above and below it, the Ponderosa Pine and Douglas Fir coming in from below and the Engelmann Spruce (*Picea engelmannii*) coming in from above. The Blue Spruce is also present along the streams, and there are patches of Quaking Aspen (*Populus tremuloides*) and Lodgepole Pine (*Pinus contorta*) in fire-climax areas. Willows, cottonwoods, and other deciduous vegetation grow along the streams. Numerous wild flowers thrive in this zone during the short growing season.

The Hudsonian Zone lies between 10,500 and 11,200 feet on northeastern exposures and between 11,000 and 12,000 feet on southwestern exposures. This is the true Spruce-Fir zone, a region with still higher precipitation than the lower zones, the dominants being the Engelmann Spruce and the Subalpine or Balsam Fir (*Abies lasiocarpa*) which becomes the much-twisted "krummholz" at timberline. These are southern representatives of the boreal spruce-fir forests of northern North America. Stands of Limber Pine are also found in this zone, and moist meadows, ponds, and bogs are not uncommon. It is even richer in wild flowers than the preceding zone. *Vaccinium* and *Arnica* often provide the understory on the forest floor. Occasionally the Bristlecone Pine (*Pinus aristata*) is encountered in this zone or in the upper part of the Canadian.

The Arctic-Alpine Zone is that portion of the mountains above timberline. In El Paso County, this zone begins at 11,200 feet on northeast exposures and about 12,000 feet on southwest exposures. It is confined to Pike's Peak proper and to the two peaks of Almagre, just to the southeast of Pike's Peak. There are

no trees, of course, but this lack is more than compensated for by the profusion of tundra plants and flowers. In the boulder fields (fell fields) plants of the following genera may be found: *Polemonium*, *Silene*, *Dryas*, *Arenaria*, *Erigeron*, *Phlox* and *Selaginella*. The alpine grasslands are composed of a number of sedges, grasses, and forbs, such as *Carex*, *Kobresia*, *Poa*, *Phleum*, *Deschampsia*, *Trisetum*, *Agrostis*, *Festuca*, *Polygonum*, *Potentilla*, and *Trifolium*. In the more moist areas, *Carex*, *Eleocharis*, *Salix*, *Caltha*, and *Ranunculus* are the most common.

From this outline of the floral features and life zones of El Paso County, it can be seen that, following the automobile road up Pike's Peak, one can in effect drive from northern Arizona to the shores of the Arctic Ocean in two hours.

METHODS AND OBSERVATIONS

Most of the work performed in this study falls into three general categories: first, the actual field investigations carried on within the County, which provided a basis for status determinations; second, the detailed examinations of the Aiken Collection for the purpose of discovering any unpublished specimens and to check on controversial records; and third, the utilization of these data to construct an annotated County species list which represents reasonably well the avifaunal situation within the County today. This work is described in more detail below.

FIELD INVESTIGATIONS

From the summer of 1947 to the summer of 1951, approximately 290 individual field trips were performed within the County, the sole purpose of which was to observe and/or collect birds. The duration of these trips varied from several hours to all day, and many were accomplished in connection with my duties as teaching fellow in charge of field trips for the class in ornithology at Colorado College. In addition, a good portion of the summer of 1955 was spent in the County to visit the more remote portions and to finish the field work begun eight years before. During this field work, every effort was made to collect specimens, but the rapid settlement of El Paso County has made collecting increasingly difficult, and consequently many interesting sight records are not substantiated with specimens.

Every part of the County was visited, with emphasis on those localities known to attract birds, and a daily log of observations was kept, limited to those species of more than passing interest. Any observations or collections of considerable significance or unusual rarity were transcribed to species filing cards for ready reference. Those data attributed to other investigators and incorporated into this study were scrutinized thoroughly for authenticity, and their authors' ability to make reliable field determinations was taken into consideration. A number of unusual records were discarded on this basis.

AIKEN COLLECTION

Following the deaths of Aiken in 1936 and Warren in 1942, the splendid Aiken Bird Collection was relegated to a dusty corner of the attic in Palmer Hall at Colorado College. In 1950, the authorities at the College were persuaded that the Collection deserved better treatment; and three Zoology students, Philip W. Longenecker (now deceased), Andrew Spielman, and I, were authorized to move it to a better location, reorganize it so as to conform with the latest Check-List order, fumigate it, and repair the cases. This work provided an excellent opportunity to become acquainted with the Collection and to make notes on its specimens. Later, during 1955 and 1956, six full days were spent studying the Collection and its index, with particular attention to specimens added since 1914, the date of Aiken and Warren's publication.

ANNOTATED SPECIES LIST

The following list represents what is known of El Paso County birds up to the time of this writing. The Fourth Edition of the A. O. U. Check-List (1931) has been followed as to order and nomenclature, and the latter has been corrected to conform with Supplements XIX through XXX (1944-1955). Taxonomic categories other than Order and Family have been ignored for the sake of simplicity, and in the few species where the status of subspecific forms in the region is still being debated only the species has been listed as a heading, followed by a discussion of the problems involved. When species are represented in the Aiken Collection, this fact is noted if significant, and the Aiken Collection is referred to hereafter merely as the "Collection". Statements attributed to Aiken and unsupported by citation are understood to be based on the Aiken and Warren publication of 1914.

ORDER GAVIIFORMES

FAMILY GAVIIDAE

Gavia immer (Brünnich). Common Loon. A rare migrant. I have no records, but Gadd shows one for April, 1940, and two during the fall of 1941. Loons reported to be of other species, taken by Aiken (1900), have turned out to be this species (Hersey, 1917). A number of these birds were brought to Aiken during his years in Colorado Springs.

ORDER COLYMBIFORMES

FAMILY COLYMBIDAE

Colymbus auritus cornutus Gmelin. American Horned Grebe. A regular migrant, uncommon. This bird is seen every year although in small numbers and is apt to be overlooked, especially on the larger reservoirs. My records are mostly spring dates, ranging from March 17 to May 11.

Colymbus caspicus californicus (Heermann). Eared Grebe. A fairly common migrant and summer resident. Breeds in marshes in the County.

Aechmophorus occidentalis (Lawrence). Western Grebe. A regular migrant and occasional summer resident, not common. On July 1, 1951, I saw and photographed one on Beaver Creek near Rosemont on the high mountain slopes of Pike's Peak. It was in a small pool of water and appeared in good health; it emitted strange noises and raised its crest.

Podilymbus podiceps podiceps (Linnaeus). Pied-billed Grebe. A common migrant and summer resident. Breeds in the County.

ORDER PELECANIFORMES

FAMILY PELECANIDAE

Pelecanus erythrorhynchos Gmelin. White Pelican. An uncommon migrant of irregular occurrence. Dates range from the last week in April to the first week in November.

FAMILY PHALACROCORACIDAE

Phalacrocorax auritus auritus (Lesson). Double-crested Cormorant. An uncommon migrant. May breed in the County although there are no records. I recorded four at Johnson Reservoir as late as May 16, 1948.

ORDER CICONIIFORMES

FAMILY ARDEIDAE

Ardea herodias treganzai Court. Treganza's Heron. Common migrant and summer resident. Breeds in the County along the Big Sandy. Collection specimens are of this race and not the eastern form, *h. herodias*, although it is possible the latter occurs.

Casmerodius albus egretta (Gmelin). American Egret. Accidental. There is no specimen for the County, and but one good sight record. Two taxidermist assistants of Aiken observed one in a cottonwood tree five miles south of Colorado Springs on May 12, 1899, a record Aiken accepted.

Leucophox thula brewsteri (Thayer and Bangs). Brewster's Egret. An uncommon migrant and summer resident. May breed in the Great Blue Heron rookery of the Big Sandy.

Dichromanassa rufescens rufescens (Gmelin). Reddish Egret. Accidental. There is a specimen in the Collection which was brought to Aiken in the fall of 1875, having been killed near Colorado Springs. This is the only record.

Nycticorax nycticorax hoactli (Gmelin). Black-crowned Night Heron. An uncommon migrant and summer resident. There was a small breeding colony in the cottonwoods along Fountain Creek south of Colorado Springs in 1949.

Botaurus lentiginosus (Rackett). American Bittern. An uncommon summer resident. Breeds in the County.

Ixobrychus exilis exilis (Gmelin). Eastern Least Bittern. Rare. Only two specimens for the County, one taken about 1886, the other in June, 1907.

FAMILY CICONIIDAE

Mycteria americana Linnaeus. Wood Ibis. A rare straggler. Aiken shot three near Colorado Springs about 1883, the only records for the County.

FAMILY THRESKIORNITHIDAE

Plegadis falcinellus falcinellus (Linnaeus). Eastern Glossy Ibis. The only records for the County are for the 10th, 12th, and 14th of May, 1950, at which time I observed three, two, and two

birds, respectively, at different ponds near the Fountain Valley School. They were not collected.

Plegadis mexicana (Gmelin). White-faced Glossy Ibis. Rare. Two were taken in the south-central part of the County in October, 1890. Peabody (1895) took one near Colorado Springs about that time. There are two specimens in the Collection collected in May, 1916, and May, 1928, both near Colorado Springs. I saw 11 at Fountain on April 30, 1950, and another one on May 4, 1951, on the Camp Carson Pond.

ORDER ANSERIFORMES

FAMILY ANATIDAE

Olor columbianus (Ord). Whistling Swan. Rare. I can find only one record, which is a skin in the Collection taken in the fall of 1910 at Prospect Lake in Colorado Springs.

Branta canadensis ssp. Canada Goose. A regular migrant, occurring in small numbers, occasionally wintering. The racial status of the Canada Geese in the County, indeed, the entire state of Colorado, is imperfectly known. There are no specimens in the Collection to help solve the problem. On the basis of distributions, sight identifications, and reports of hunters, the following races probably occur: *Branta canadensis canadensis* (Linnaeus), Common Canada Goose; *Branta canadensis leucopareia* (Brant), Lesser Canada Goose; *Branta canadensis hutchinsi* (Richardson), Hutchin's Goose. In addition, during the first week in April, 1949, I observed a Canada Goose about the size of a Mallard on the Sinton Dairy Pond northwest of Colorado Springs. It was collected later in the week by Dr. R. M. Stabler of Colorado College and proved to be *Branta canadensis minima* Ridgway, the Cackling Goose, the only specimen of this race collected in the State. It is now at the Denver Museum of Natural History. Among my records for 1950, I find the following note: "8, 12, 14 April. Bates Ranch (south of Colorado Springs) Lesser Canada Goose. Much smaller than Common Canada Goose, larger than Cackling Goose; no dark throat as in latter; compared size as it swam with Mallards." Aiken reported the Hutchin's Goose as being killed occasionally by hunters and mentioned collecting one in December, 1871, but the specimens are not in the Collection. To the five races of the Canada Goose listed in the Fourth Edition of the A.O.U. Checklist (1913), four more have recently been added, further complicating the picture in El Paso County.

Chen hyperborea hyperborea (Pallas). Lesser Snow Goose. Occasional migrant. There are two specimens in the Collection.

Chen hyperborea allantica Kennard. Greater Snow Goose. Two specimens secured from a flock of 9 or 10 on October 16, 1913, twelve miles south of Colorado Springs, proved to be this race, and this is the only record for the County.

Anas platyrhynchos platyrhynchos Linnaeus. Common Mallard. Common resident. Breeds in the County.

Anas strepera Linnaeus. Gadwall. Common resident, less numerous in the winter. I found a nest at the Fountain Valley School pond on May 12, 1950.

Mareca americana (Gmelin). Baldpate. Common migrant, a few wintering and some seen in summer.

Anas acuta Linnaeus. Pintail. Resident, most common during migration, least common in winter. However, there are no nesting records for the county.

Anas carolinensis Gmelin. Green-winged Teal. A common migrant, with a few seen in summer and winter. No breeding records.

Anas discors Linnaeus. Blue-winged Teal. Common migrant and summer resident. Breeds at a number of localities in the County.

Anas cyanoptera septentrionalium Snyder and Lumsden. North American Cinnamon Teal. Uncommon migrant and summer resident, but there are no County breeding records.

- Spatula clypeata* (Linnaeus). Shoveller. Fairly common migrant and summer resident, although there are no breeding records.
- Aythya americana* (Eyton). Redhead. Common migrant and occasional summer resident, but there are no breeding records for the County.
- Aythya collaris* (Donovan). Ring-necked Duck. An uncommon but regular migrant. I have records for every spring, 1947-1951, and for 1955.
- Aythya valisineria* (Wilson). Canvas-back. Rare. Although it was more common in years gone by, I have only three recent records: Seven birds at Fountain on March 30, 1950, one bird on the Bates Ranch Pond April 22, 1950, and 21 birds at Fountain on March 26, 1951.
- Aythya marila nearctica* Stejneger. Greater Scaup Duck. Rare. There is but one record for the County, a "Scaup with a bright green head" I observed at Fountain, March 30, 1950. No doubt it occurs more frequently than supposed among the flocks of the very numerous Lesser Scaup Duck.
- Aythya affinis* (Eyton). Lesser Scaup Duck. A common migrant.
- Bucephala clangula americana* (Bonaparte). American Golden-eye. An uncommon regular migrant and winter visitor.
- Bucephala islandica* (Gmelin). Barrow's Golden-eye. The only County reference I have for this species is a postcard I received from S. W. Gadd in 1939 in which he listed it as "occasional!" with no data.
- Bucephala albeola* (Linnaeus). Buffle-head. An uncommon migrant and winter visitor.
- Clangula hyemalis* (Linnaeus). Old-squaw. There is only one record for the County. Gadd informed me that in November, 1940, some boys shot one on the Fountain Valley School Pond and took it to F. Martin Brown, who identified it.
- Histrionicus histrionicus* (Linnaeus). Harlequin Duck. Gadd observed a female of this species on the Austin Bluffs Pond on February 25, 1940, just east of Colorado Springs. There are no other records for the County.
- Melanitta deglandi* (Bonaparte). White-winged Scoter. A specimen killed on Johnson Reservoir on October 16, 1907, and mounted by Aiken is the only record for the County.
- Oxyura jamaicensis rubida* (Wilson). Ruddy Duck. Common migrant and occasional summer resident. May nest in the County.
- Lophodytes cucullatus* (Linnaeus). Hooded Merganser. Rare. There are five records for the County. In addition to the one mentioned by Aiken, there is a specimen in the Collection taken on September 16, 1925, Long (1938) saw a pair near Falcon on April 20, 1937, and Gadd observed one at Johnson Reservoir on April 28, 1940.
- Mergus merganser americanus* Cassin. American Merganser. A common migrant and winter resident. Most of Aiken's records were in the fall, but in recent years this species seems to be much more common in the late winter and early spring.

ORDER FALCONIFORMES

FAMILY CATHARTIDAE

- Cathartes aura teler* Friedmann. Western Turkey Vulture. A fairly common summer resident. On January 15, 1949, I observed three birds of this species at Rock Creek, south of Colorado Springs, the only winter record for the County and one of the very few for the State.

FAMILY ACCIPITRIDAE

- Elanoides forficatus forficatus* (Linnaeus). Swallow-tailed Kite. One record for the County, a specimen taken at Colorado Springs in August, 1877, and brought to Aiken.
- Ictinia mississippiensis* (Wilson). Mississippi Kite. Aiken saw one in Deadman's Canyon, southwest

of Colorado Springs on the Canyon City road in the summer of 1873, the only record for the County.

- Accipiter gentilis atricapillus* (Wilson). Eastern Goshawk. An uncommon migrant and summer resident. I have found it nesting in the Cheyenne Canyons west of Colorado Springs and also much higher on the slopes of Pike's Peak in lodgepole and spruce-fir. Though seldom seen, this secretive species is much commoner than supposed. A Colorado Springs falconer had no difficulty trapping three birds in two weeks of December, 1948, just northwest of the Colorado Springs city limits.
- Accipiter gentilis laingi* Taverner. Western Goshawk. Straggler from the west. There are six specimens in the collection.
- Accipiter striatus velox* (Wilson). Sharp-shinned Hawk. An uncommon migrant and summer resident. Breeds in the County.
- Accipiter cooperii* (Bonaparte). Cooper's Hawk. An uncommon migrant and summer resident, breeding in the County and more common in the summer.
- Buteo jamaicensis kriderii* Hoopes. Krider's Hawk. Casual. There are three specimens of this pale race of the Red-tailed Hawk in the Collection, and I have a record of an observation of one bird a few miles east of Colorado Springs on August 4, 1955.
- Buteo jamaicensis calurus* Cassin. Western Red-tailed Hawk. An uncommon resident, more common in the summer, breeding in the County.
- Buteo platypterus platypterus* (Vieillot). Broad-winged Hawk. Accidental. The only record for the County is for 1926. Aiken (1927) states: "On or about May 15, 1826 (*sic*), Mr. J. H. Weyner shot one at Seven Falls to prevent it catching his tame chipmunk. . . ." The specimen is in the Collection.
- Buteo swainsoni* Bonaparte. Swainson's Hawk. Common summer resident. Large flights of this species may be seen on the plains during migration. On September 23, 1955, I saw a flight of 50 birds between Fountain and the Fountain Valley School.
- Buteo lagopus s. johannis* (Gmelin). American Rough-legged Hawk. An irregular winter visitant. Some winters pass with no signs of these large hawks. During other winters, they may be very numerous. The winter of 1949-50 witnessed a large wave of them from the north, and they were common in the County from November to March. Local farmers informed me that this was also a year of extraordinary numbers of jack-rabbits, upon which the hawks prey almost exclusively. I have a record in 1947 for as early as September 24.
- Buteo regalis* (Gray). Ferruginous Rough-leg. Uncommon resident. It probably breeds on the plains, but there are no records for the County.
- Aquila chrysaetos canadensis* (Linnaeus). Golden Eagle. An uncommon resident. I know of at least five eyries within the County, most of them ancestral. One is in the top of a truncated Ponderosa Pine east of Colorado Springs which has been occupied for a number of years.
- Haliaeetus leucocephalus leucocephalus* (Linnaeus). Southern Bald Eagle. An uncommon winter visitant. These birds are rather irregular in their occurrence. Several passed the winter of 1949-1950 at Johnson Reservoir, sitting on the ice and feeding on dying carp. Sixty individuals were observed on the ice of Eleven-Mile Reservoir near Lake George, Colorado, just west of the county line, February, 1951.
- Circus cyaneus hudsonius* (Linnaeus). Marsh Hawk. Common resident, more frequent in the summer. Breeds in the County. This bird performs a strange post-breeding-season vertical migration into the high mountains. While driving up the Pike's Peak Highway in late August of 1948, I observed one at the half-way point, following the rising currents of

air and roughly paralleling the road. I was able to keep it in sight until reaching the summit, at which point it proceeded to spiral upward until lost from sight, gaining a mean sea-level altitude of at least 18,000 feet.

FAMILY PANDIONIDAE

Pandion haliaetus carolinensis (Gmelin). Osprey. Rare. An irregular migrant. Aiken prepared two specimens in 1912, Gadd saw one on the Banning-Lewis Ranch east of Colorado Springs on January 19, 1941, and I saw one on the Star Ranch just south of Colorado Springs on September 24, 1950.

FAMILY FALCONIDAE

Falco mexicanus Schlegel. Prairie Falcon. Fairly common resident, more common in summer than winter. Breeds along the foothills and on bluffs and cliffs on the plains. An eyrie occupied in the Garden of the Gods west of Colorado Springs in 1874 was still in use in 1950.

Falco peregrinus anatum Bonaparte. Duck Hawk. Rare summer resident and irregular migrant. I have perhaps a dozen field observations between 1947 and 1951. I know of two eyries within the County, one of which is occupied every year.

Falco columbarius richardsonii Ridgway. Richardson's Pigeon Hawk. Rare migrant and winter resident. There are four specimens in the Collection, all taken in the months of December and January, and Aiken had a bird brought to him in October of 1913. I have a sight record for March 29, 1948.

Falco columbarius bendirei Swann. Western Pigeon Hawk. Uncommon migrant and winter resident. Dates range from September to May. I observed one in Colorado Springs on September 14, 1947, which seems to be the earliest fall date.

Falco sparverius sparverius Linnaeus. Eastern Sparrow Hawk. Common summer resident, many wintering. On July 28, 1955, T. Paul Maslin and I observed a Sparrow Hawk being chased by Pipits near the summit of Pike's Peak, well above 13,000 feet.

ORDER GALLIFORMES

FAMILY TETRAONIDAE

Dendragapus obscurus obscurus (Say). Dusky Grouse. An uncommon resident of coniferous forests in the mountains.

Pedioecetes phasianellus jamesi Lincoln. Plains Sharp-tailed Grouse. Probably extinct in the County now, although many years ago they were abundant along the Arkansas Divide. There have been no records since before the turn of the century.

FAMILY PHASIANIDAE

Colinus virginianus virginianus (Linnaeus). Eastern Bob-white. Introduced into the County a number of times by various people including General Palmer. All had died out by 1915 and the bird is now extinct in the area.

Callipepla squamata pallida Brewster. Arizona Scaled Quail. Uncommon resident. This bird extended its range northward along the Plains in Colorado about the turn of the century, reaching El Paso County in 1908, the farthest north it has penetrated. A rather unusual occurrence was a pair collected on the summit of Pike's Peak, far above its normal habitat.

Phasianus colchicus Linnaeus. Ring-necked Pheasant. Fairly common resident, having been introduced on several occasions. Inhabits hedgerows and cultivated fields on the plains.

FAMILY MELEAGRIDIDAE

Meleagris gallopavo merriami Nelson. Merriam's Turkey. Extinct in the County. Formerly common, but by 1875 it had been wiped out.

ORDER GRUIFORMES

FAMILY GRUIDAE

Grus americana (Linnaeus). Whooping Crane. Aiken noted this bird as "occasional on migration" in 1872 (Aiken and Holden, 1872). This is the first mention of it for the State and the only published reference for the County. There is a pair of Whooping Crane wings in the Collection which is not referred to anywhere in the literature and which bears the label "near Colorado Springs about 1880, CEA?" and which may be the only authentic Colorado specimen. The bird no longer migrates through El Paso County.

Grus canadensis canadensis (Linnaeus). Little Brown Crane. An uncommon, irregular migrant. It seems to be decreasing in recent years.

Grus canadensis tabida (Peters). Sandhill Crane. Rare migrant. There is only one specimen for the County, which Aiken prepared in 1885. However, it is almost impossible to tell this bird in the field from the Little Brown Crane, and the relative abundance of the two forms can only be guessed at in the absence of more specimens. There have been no crane records in recent years.

FAMILY RALLIDAE

Rallus limicola limicola Vieillot. Virginia Rail. A fairly common summer resident, a few wintering. Breeds in the County.

Porzana carolina (Linnaeus). Sora. A common summer resident, some wintering. Breeds in the County. I have a record for December 27, 1949, and several for January and February.

Gallinula chloropus cackinnans Bangs. Florida Gallinule. Accidental. The only specimen for the County and the State was one taken by Allen and Brewster on May 9, 1882, near Colorado Springs (Allen and Brewster, 1883).

Fulica americana americana Gmelin. American Coot. A common migrant and summer resident, nesting in the County. A few winter. I have a record for December 27, 1949. The bird was collected.

ORDER CHARADRIIFORMES

FAMILY CHARADRIIDAE

Charadrius hiaticula semipalmatus Bonaparte. Semipalmated Plover. Rare migrant. There are only two records, one on May 3, 1937, two miles south of Peyton (Long, 1938), and one observed by L. M. Baylor and me at Johnson Reservoir on September 23, 1955. However, the bird is more common both north and south of the County and probably passes through more frequently than observed.

Eupoda montana (Townsend). Mountain Plover. Formerly a common summer resident, but there are no records since 1913. However, the bird still breeds sparingly just to the north of the County, and it is almost certain that a few migrate through each year.

Charadrius vociferus vociferus Linnaeus. Killdeer. A very common summer resident, many wintering. Breeds along stream bottoms and in marshy areas on the plains.

Squatarola squatarola (Linnaeus). Black-bellied Plover. A rare migrant. Perhaps four or five records for the County. One was taken by Aiken about 1885, and one or two others were

brought to him to be prepared. I saw one at Fountain on May 14, 1950, and another one at Johnson Reservoir on May 12, 1951.

FAMILY SCOLOPACIDAE

- Philohela minor* (Gmelin). American Woodcock. Accidental. There have been no records for over 50 years. Aiken flushed one on the Starr Ranch south of Broadmoor in August, 1898, and was also informed that two hunters on Rock Creek had killed two there.
- Capella gallinago delicata* (Ord). Wilson's Snipe. Common migrant and summer resident, many wintering. Breeds in the County, inhabiting marshy places on the plains and in the foothills.
- Numenius americanus americanus* Bechstein. Long-billed Curlew. Rare migrant and summer resident. A few are seen each spring and fall, and I found a pair in June of 1950 on the Banning-Lewis Ranch east of Colorado Springs which had a nest with one egg in it.
- Bartramia longicauda* (Bechstein). Upland Plover. The only record for the County was published by Allen and Brewster (1883) who said: "Large numbers were brought in by gunners 28 April" (1882). Aiken never collected any specimens or even saw the bird in all his years in El Paso County. As he was the only taxidermist in the region and the intimate of all the hunters, it seems odd that no specimens were ever brought to him. Warren and Gadd never saw the bird, and I have no records. It is unlikely that two eminent ornithologists like Allen and Brewster could have been mistaken and more likely that hunters happened to shoot a number of the birds from one of the few groups ever to pass through the County. However, this explanation may also be criticized on the grounds that this species tends to travel singly rather than in large groups or flocks.
- Actitis macularia* (Linnaeus). Spotted Sandpiper. A common summer resident. Breeds in marshy areas at the edges of ponds from the plains to the high mountains.
- Tringa solitaria cinnamomea* (Brewster). Western Solitary Sandpiper. An uncommon but regular migrant. Some return from the north at a very early date in the summer. I have a record for a pair on the Hassler Place of the Sinton Dairy Farm south of Colorado Springs for July 15, 1951.
- Caloptrophorus semipalmatus inornatus* (Brewster). Western Willet. An uncommon migrant and, perhaps, summer resident. May breed in the County.
- Totanus melanoleucus* (Gmelin). Greater Yellow-legs. An uncommon, regular migrant.
- Totanus flavipes* (Gmelin). Lesser Yellow-legs. A common migrant.
- Erolia melanotos* (Vieillot). Pectoral Sandpiper. Rare migrant. Gadd has a record for 1942 at Johnson Reservoir, the only one I can find for the County. It occurs sparingly during migration north and south of the County.
- Erolia fuscicollis* (Vieillot). White-rumped Sandpiper. Rare migrant. The only specimen for the County was one taken at Colorado Springs by Aiken and verified by Ridgway.
- Erolia bairdii* (Coues). Baird's Sandpiper. A very common migrant. The most abundant of all the shorebirds passing through the County.
- Erolia minutilla* (Vieillot). Least Sandpiper. A common migrant.
- Limnodromus* Sp. Dowitcher. Until 1954, the A. O. U. Check-list recognized the Long-billed Dowitcher (*Limnodromus griseus scolopaceus* (Say)) as the form migrating through Colorado. In that year, a new race called the Inland Dowitcher (*Limnodromus griseus hendersoni* Rowan) was described, which, on the basis of distribution, seems to be the Colorado bird. In addition, the Long-billed Dowitcher was raised to specific rank, becoming *Limnodromus scolopaceus* (Say). Until a study is made of many Colorado specimens to determine which of these forms occurs in Colorado, it seems best to limit the annotation to the genus. A common migrant, more common in spring than fall.

Micropalama himantopus (Bonaparte). Stilt Sandpiper. Rare migrant. There are three records for the County. A female in the Collection was taken near Colorado Springs, May 14, 1884. Gadd saw one on the Austin Bluffs Pond east of Colorado Springs on August 16, 1939. I saw one on the Starr Ranch pond south of Colorado Springs on May 7, 1950.

Ereunetes pusillus (Linnaeus). Semipalmated Sandpiper. An uncommon migrant. It is more common than the records indicate, of which there are only three. One was brought to Aiken on May 1, 1882. I saw a flock of 22 on August 20, 1949, and a group of eight on May 12, 1950, both at the Fountain Valley School Pond. However, I am sure I saw them on a number of other occasions and, believing them to be fairly common, did not record the instances.

Ereunetes mauri Cabanis. Western Sandpiper. A rare migrant. Aiken had no records for this bird, but I observed it on several occasions. Niedrach and Rockwell (1939) class it as a common migrant at Denver, north of the County. It may merely have been overlooked in El Paso County. My last record for recent years is one bird at the Fountain Valley School on May 12, 1950.

Limosa fedoa (Linnaeus). Marbled Godwit. A rare migrant. There is no record for this shore-bird until the spring of 1937, at which time Long (1938) recorded one for the County. I saw several in 1948 and 1949, and my last observation was on the 14th of May, 1950, at Fountain.

FAMILY RECURVIROSTRIDAE

Recurvirostra americana Gmelin. Avocet. Common summer resident, breeding in the County in marshy areas about ponds on the plains.

FAMILY PHALAROPODIDAE

Steganopus tricolor Vieillot. Wilson's Phalarope. A common summer resident. Breeds in the County in marshy areas on the plains.

Lobipes lobatus (Linnaeus). Northern Phalarope. Rare migrant. A total of three records, two spring specimens taken on May 14th and 29th, both in the Aiken Collection, and a fall record on October 23, 1936, three miles south of Peyton by Long (1938).

FAMILY LARIDAE

Larus argentatus smithsonianus Coues. Herring Gull. The status of the gulls in the County is imperfectly understood. Aiken and Warren listed only two species, the Ring-billed and Bonaparte's. Extensive collecting is needed in this group. There is only one record for the present species, that of seven birds observed at close range at the Fountain Valley School by me on March 12, 1950.

Larus delawarensis Ord. Ring-billed Gull. An uncommon nonbreeding resident, more common during migration. Four specimens in the Collection, many more sight records.

Larus pipixcan Wagler. Franklin's Gull. An abundant migrant. The story of Franklin's Gull in Colorado is most interesting. Until after the turn of the century, the bird was unknown in Colorado. During the 1920's it began to be seen occasionally, and by 1939 Niedrach and Rockwell (1939) had raised it to the rank of a "common late summer and fall migrant", but with no spring dates. Until the time I arrived in El Paso County, there had been no records, but the day after arriving I saw a flock of 400 circling Colorado Springs. Since then it has become common, indeed abundant, in both the spring and the fall, and flocks of hundreds or even thousands are not unusual. My dates for the County now range from March 29 to October 27.

- Larus philadelphia* (Ord). Bonaparte's Gull. Rare. There have been a few taken in the County, one of which is in the Collection. I saw one at Fountain on April 30, 1950.
- Xema sabini sabini* (Sabine). Sabine's Gull. Casual. One specimen is in the Collection, and I have several spring records for Fountain. The specimen in the Collection is a fall bird, collected near Colorado Springs on September 23, 1914.
- Sterna forsteri* Nuttall. Forster's Tern. An uncommon migrant and summer resident. I have both spring and fall dates. May breed.
- Sterna hirundo hirundo* Linnaeus. Common Tern. Accidental. One record, a specimen taken September 25, 1925, at Johnson Reservoir and now in the Collection.
- Chlidonias niger surinamensis* (Gmelin). Black Tern. An uncommon migrant and summer resident. Occurs in both spring and fall, and a few are seen every summer. There is no nesting evidence.

ORDER COLUMBIFORMES

FAMILY COLUMBIDAE

- Columba fasciata fasciata* Say Band-tailed Pigeon. An uncommon summer resident. Fairly large flocks appear in the fall in the scrub oak along the foothills. It probably breeds in the County. In August of 1948, I saw several feeding young not long out of the nest near Half-way Camp on the Pike's Peak Highway in lodgepole pine. It has been discovered nesting just north of the County also in lodgepole pine.
- Columba livia* Gmelin. Rock Dove. Common resident, introduced. The domestic pigeon has become feral in large numbers at various points in the County, especially in the Garden of the Gods.
- Zenaidura macroura marginella* (Woodhouse). Western Mourning Dove. Common summer resident, breeding in the County at the lower elevations. A few winter. On January 6, 1952, I saw seven birds along Fountain Creek at Fountain.

ORDER CUCULIFORMES

FAMILY CUCULIDAE

- Coccyzus americanus americanus* (Linnaeus). Yellow-billed Cuckoo. A rare summer resident. I have seen this species on very few occasions, and there are only two specimens in the Collection. It may breed in the County. I have heard them a number of times during the summer.
- Coccyzus erythrophthalmus* (Wilson). Black-billed Cuckoo. The only record is a pair observed by Gadd in Monument Valley Park on the west edge of Colorado Springs on July 26, 1942.
- Geococcyx californianus* (Lesson). Road-runner. An uncommon resident. I have seen them on the mesa northwest of Colorado Springs and along Fountain Creek. Gadd says: "I banded four juveniles (August 12, 1940) from nest in cedar on south patio of Boissevain home, Broadmoor. Was told they had nested there for a number of years."

ORDER STRIGIFORMES

FAMILY TYTONIDAE

- Tyto alba pratincola* (Bonaparte). Barn Owl. An uncommon resident. There are two specimens in the Collection. In April of 1948, I found a pair nesting east of Colorado Springs in a rocky cliff. On May 16, 1950, I saw one sitting in a tree at Manitou Springs. On May 19 of the same year, one flew into my back yard in Colorado Springs and sat in a pine tree. On May

2, 1951, some boys shot one near the Hassler Place of the Sinton Dairy Farm south of Colorado Springs.

FAMILY STRIGIDAE

- Otus asio aikeni* (Brewster). Aiken's Screech Owl. A common resident. This form is the resident screech owl south of the Arkansas Divide, whereas the Rocky Mountain Screech Owl is the common resident north of the Divide. El Paso County is the type locality, and William Brewster named this bird for Aiken, who collected the type on May 29, 1872. (Brewster, 1891)
- Otus asio marwelliae* (Ridgway). Rocky Mountain Screech Owl. A rare winter resident. There are a few specimens in the Collection collected in the County.
- Otus flammeolus flammeolus* (Kaup). Flammulated Screech Owl. Rare. There are only two records for this mountain form for the County. In September, 1883, one in nestling plumage was caught alive on Fountain Creek at the mouth of Red Rock Canyon, indicating a breeding record. The other was found dead on Fountain Creek just south of Colorado Springs on May 9, 1898.
- Bubo virginianus wapacuthu* (Gmelin). Arctic Horned Owl. There is only one specimen in the Collection, taken about November, 1877. However, four or five were brought to Aiken for preparation over the years. There are no recent records.
- Bubo virginianus virginianus* (Gmelin). Great Horned Owl. Casual. There is only one record, a skin in the Collection.
- Bubo virginianus occidentalis* Stone. Montana Horned Owl. Fairly common resident. Decreasing through persecution. Nests in cottonwoods and willows along plains stream bottoms, often using old Magpie nests. Will also nest on cliffs.
- Nyctea scandiaca* (Linnaeus). Snowy Owl. Rare winter visitant. Five records for the County, all known to Aiken. There have been no occurrences since his time.
- Glaucidium gnoma californicum* Sclater. California Pygmy Owl. An uncommon resident. Nests in the County in conifers almost to timberline.
- Speotyto cunicularia hypugaea* (Bonaparte). Western Burrowing Owl. An uncommon summer resident. Breeds in the County, utilizing abandoned prairie-dog holes on the plains.
- Strix occidentalis lucida* (Nelson). Mexican Spotted Owl. A rare resident. A total of three records, two of them being specimens in the Collection. Aiken believed that it might breed in the County.
- Asio otus wilsonianus* (Lesson). Long-eared Owl. A rare resident, breeding along plains stream bottoms. Formerly quite common, but in recent years there has been only one record. I saw one along Rock Creek on January 15, 1949.
- Asio flammeus flammeus* (Pontoppidan). Short-eared Owl. Rare migrant and winter visitant. Formerly common. There is only one record in recent years; I saw one at Fountain Valley School in a marsh in December, 1948.
- Aegolius acadicus acadicus* (Gmelin). Saw-whet Owl. A rare resident. Perhaps five records, none in recent years. There are two specimens in the Collection.

ORDER CAPRIMULGIFORMES

FAMILY CAPRIMULGIDAE

- Phalaenoptilus nuttallii nuttallii* (Audubon). Nuttall's Poor-will. A common summer resident, nesting on the ground on the plains and in the foothills. During the summer of 1948, while working on the Pike's Peak Highway Patrol, I had occasion to drive from the summit to

the bottom almost every evening, and noticed hundreds of these birds sitting in the road up to 10,000 feet and above.

Chordeiles minor howelli Oberholser. Howell's Nighthawk. A common summer resident. Breeds in the County, on the plains and in foothills, laying its eggs on the ground in bare places, including the rooftops of some buildings in Colorado Springs.

Chordeiles minor hesperis Grinnell. Pacific Nighthawk. Accidental. Two specimens in the Collection belong to this race. The index card bears this notation: "June 2, 1914. Identified by Oberholser, first record for El Paso County, third for Colorado. CEA." These are the only records.

Chordeiles acutipennis texensis Lawrence. Texas Nighthawk. There is one specimen in the Collection, the only record for the County. The label reads: "August 25, 1922. Found on prairie . . . broken wing."

ORDER APODIFORMES

FAMILY APODIDAE

Aeronautes saxatilis sclateri C. H. Rogers. Northeastern White-throated Swift. Common summer resident. Breeds on rocky cliffs on the plains and at moderate elevations. Earliest date I have is for one bird I observed at the Garden of the Gods on March 23, 1952.

FAMILY TROCHILIDAE

Archilochus alexandri (Bourcier and Mulsant). Black-chinned Hummingbird. The presence of this species on the list is by virtue of several sight identifications and no specimens. Aiken saw a male which he believed was of this species south of Colorado Springs on May 17, 1898. He also saw a female in Monument Valley Park on August 18, 1907 which, by its oscillating tail movement, he identified as a Black-chinned. Again, in July of 1906, a visiting lady bird-student told him that she positively identified a Black-chin near Seven Falls. It should be pointed out here that unless the red gorget of the following species is seen in perfect light, it appears black. Furthermore, the oscillating tail movement is not unique with the female Black-chin; I have seen female Broad-tails exhibit it on several occasions. However, I have heard second- or third-hand that a man in Ute Pass west of Colorado Springs who feeds hummingbirds has had several Black-chins, and perhaps it would be best to list this species, if not hypothetical, at least accidental.

Selasphorus platycercus platycercus (Swainson). Broad-tailed Hummingbird. A common summer resident, breeding in the County on the plains and in the mountains. It may be seen frequently as high as the alpine tundra of Pike's Peak, feeding on the wild flowers there.

Selasphorus rufus (Gmelin). Rufous Hummingbird. A fairly common fall migrant. These little birds arrive from farther north as early as July. Gadd wrote me that he "was told by a Colorado Springs neighbor that an all-red hummingbird nested in her yard, in a vine, when she lived in Ivywild [part of Colorado Springs]." This report is extremely interesting since the closest breeding grounds of this species is almost 500 miles to the northwest.

Stellula calliope (Gould). Calliope Hummingbird. Accidental. There are three specimens for the County. An adult male was found dead in Cheyenne Canyon on July 25, 1897 by a Mrs. Martin, who brought it to Aiken. (Cooke, 1897) Another was found dead in August of 1915, and the third was collected on July 23, 1919. The latter two birds are in the Collection. In addition, the man in Ute Pass who feeds hummingbirds is reported to have had several Calliope Hummingbirds at his feeders since 1946.

ORDER CORACIIFORMES

FAMILY ALCEDINIDAE

Megaceryle alcyon alcyon (Linnaeus). Eastern Belted Kingfisher. A fairly common summer resident, breeding in the County in vertical banks along plains streams. A few remain for the winter.

ORDER PICIFORMES

FAMILY PICIDAE

Colaptes auratus luteus Bangs. Northern Flicker.

Colaptes auratus borealis Ridgway. Boreal Flicker.

Colaptes cafer collaris Vigors. Red-shafted Flicker.

El Paso County lies at the western edge of a broad zone of hybridization between the yellow-shafted flickers of the east and the red-shafted flickers of the west. The common, almost abundant breeding resident is the Red-shafted Flicker. The Boreal Flicker breeds to the north and is an occasional winter visitant. The Northern Flicker is the eastern form and has been observed in the County on several occasions. There is a specimen in the Collection dated January 12, 1921; Gadd saw one at Johnson Reservoir in April of 1941; and I saw one at Johnson Reservoir on January 7, 1950. These birds were apparently pure Northern "yellow-shafted" Flickers, but no one can say how many Red-shafted genetic characters they possessed. In addition to these three forms, hybrids are encountered frequently between the Northern and the Red-shafted Flickers. There are several specimens in the Collection, and there are a number of sight records for western birds with black moustaches and eastern birds with red moustaches, etc.

Centurus carolinus zebra (Boddaert). Western Red-bellied Woodpecker. Accidental. Only one specimen has been taken; Aiken collected it at Fountain in 1873, but it is not in the Collection. There are no sight records.

Melanerpes erythrocephalus Brodtkorb. Western Red-headed Woodpecker. A common summer resident, breeding in the County. It nests in tree-holes along plains stream bottoms and in cottonwood groves.

Asyndesmus lewis Gray. Lewis's Woodpecker. A fairly common resident, more abundant in the summer. Many early records show this bird was primarily a mountain bird. Warren (1908) listed it at Green Mountain Falls west of Colorado Springs. Cary (1911) listed it as a Transition Zone breeder. In recent years it seems to have deserted the mountains and become a plains bird, inhabiting mainly cottonwood trees.

Sphyrapicus varius nuchalis Baird. Red-naped Sapsucker. An uncommon resident, rare in winter. Breeds in the County, apparently being confined to the aspens in the mountains.

Sphyrapicus thyroideus nataliae (Malherbe). Natalie's Sapsucker. An uncommon summer resident, breeding in the County in the Ponderosa pines.

Dendrocopos villosus monticola (Anthony). Rocky Mountain Hairy Woodpecker. A fairly common resident, nesting in the foothills and mountains. It is possible that other races of the Hairy Woodpecker visit the County in the winter, since I have a number of sight records of birds with heavy white scapular spotting which is not typical of *monticola*. However, a series of specimens would be necessary to make this determination, and there are none in the Collection. It may be said tentatively that *D. v. villosus* (Linnaeus) may be an uncommon winter visitant.

Dendrocopos pubescens medianus (Swainson). Northern Downy Woodpecker.

Dendrocopos pubescens nelsoni (Oberholser). Nelson's Downy Woodpecker.

Dendrocopos pubescens leucurus (Hartlaub). Batchelder's Woodpecker. The status of the downy woodpeckers in the County is not well understood. Batchelder's Woodpecker is the common resident form, breeding in the County, although it did not in Aiken's time. However, there are a number of winter sight records for the other two, and it seems certain that they are at least rare or uncommon visitants. Some County specimens, after critical examination, may prove to be of these latter races. The picture is complicated further by the fact that occasionally they stay to breed, mating with the resident Batchelder's. In May of 1950, I saw what I took to be a Northern Downy male nesting south of Colorado Springs with a Batchelder's female. The former possessed profuse covert spotting, which is not typical of the Batchelder's, which has little or no such spotting.

Dendrocopos scalaris symplectus (Oberholser). Texas Woodpecker. A rare resident. Apparently this woodpecker has been extending its range northwestward from southeastern Colorado into El Paso County. Aiken did not list it, but Sclater (1912) stated that "recently, Aiken has received examples from Mr. Wright, taken in the Fountain Valley some 20 miles north of Pueblo." (Just about at the County line) It is represented in the Collection by 10 skins, seven of which were taken just south of the County and one at Ivywild in Colorado Springs on September 1, 1915. Gadd (1914) published a note on this species, listing a number of sight records for the County during 1940 and 1941, the months of December, February, March, and May being represented. He also wrote me of seeing a female on August 2, 1952. On July 1, 1950, M. G. Stitt and I found a nest on Turkey Creek above Teller Reservoir not far from the site of Aiken's cabin of many years before, the only County nesting record.

Picoides tridactylus dorsalis Baird. Alpine Three-toed Woodpecker. A rare resident. The small amount of spruce-fir within the County limits the number of these birds.

ORDER PASSERIFORMES

FAMILY TYRANNIDAE

Tyrannus tyrannus (Linnaeus). Eastern Kingbird. A common summer resident. Breeds in the County on the plains in a variety of situations.

Tyrannus verticalis Say. Arkansas Kingbird. A very common summer resident, nesting in the County along stream bottoms and about buildings on the plains.

Tyrannus vociferans vociferans Swainson. Cassin's Kingbird. An uncommon summer resident. Has been found breeding at several places along streams.

Muscivora forficata (Gmelin). Scissor-tailed Flycatcher. Accidental. One record by Gadd at Colorado Springs on July 22, 1939.

Myiarchus cinerascens cinerascens (Lawrence). Ash-throated Flycatcher. Rare summer resident. Perhaps five records. Aiken took one on May 21, 1872, near Red Creek Canyon. A specimen in the Collection was collected at Beaver Creek on June 25, 1877. Gadd saw one on July 10, 1939, in South Cheyenne Canyon, and I have two spring records for Austin Bluffs east of Colorado Springs. It may breed in the pinyon-juniper of the southwestern part of the County.

Sayornis saya saya (Bonaparte). Say's Phoebe. A common summer resident, nesting commonly in farm buildings on the plains.

Empidonax traillii brewsteri Oberholser. Little Flycatcher. A common summer resident. Breeds along the streams, mainly in *Alnus* and *Betula*.

Empidonax minimus (Baird and Baird). Least Flycatcher. An uncommon migrant and occasional summer resident. There are no breeding records. In addition to a number of sight records, there have been four specimens taken in the County, three of which are in the Collection.

Empidonax hammondi (Xantus). Hammond's Flycatcher. An uncommon summer resident.

Allen and Brewster's statement (1883) that it "arrives later than Wright's and is less common" still holds. While working on the Pike's Peak Highway in the summer of 1948, I found both Hammond's and Wright's along the road, the former inhabiting the more dense conifers and occurring higher up, the latter seeming to prefer the drier, brushy, open hillsides at lower elevations.

Empidonax oberholseri Phillips. Wright's Flycatcher. An uncommon summer resident. Quite common during migration. See preceding species.

Empidonax wrightii Baird. Gray Flycatcher. Casual. This western form is represented in the County by five specimens in the Collection. There have been no sight records.

Empidonax difficilis difficilis Baird. Western Flycatcher. An uncommon summer resident. Breeds in the mountains.

Contopus richardsonii richardsonii (Swainson). Western Wood Pewee. An abundant summer resident. Breeds commonly in the County, in the towns, in the foothills, and as high as the aspen groves in the mountains.

Nuttallornis borealis (Swainson). Olive-sided Flycatcher. An uncommon summer resident, breeding in the mountains.

FAMILY ALAUDIDAE

Eremophila alpestris hoyti (Bishop). Hoyt's Horned Lark. Rare winter visitant. There are two specimens in the Collection, taken in 1923.

Eremophila alpestris entymia (Oberholser). Saskatchewan Horned Lark. An abundant resident, breeding both on the plains and on the alpine tundra, although Aiken remarked that it did not breed on the tundra of Pikes Peak. There is a specimen in the Collection which was diagnosed by Oberholser as being intermediate between this form and *E. a. praticola* (Henshaw), the Prairie Horned Lark.

FAMILY HIRUNDINIDAE

Tachycineta thalassina lepida Mcarns. Violet-green Swallow. A common summer resident. Nests from the edge of the foothills up into the mountains in holes in trees, on cliffs, and in buildings.

Iridoprocne bicolor (Vieillot). Tree Swallow. A rare summer resident, more common during migration. Breeds sparingly in the County in tree-holes in the foothills and mountains.

Riparia riparia riparia (Linnaeus). Bank Swallow. An uncommon migrant and uncommon summer resident, nesting in vertical banks on the plains. There is only one specimen in the Collection, dated May 12, 1935. However, I have several sight records and found a nest on the Sinton Dairy Farm south of Colorado Springs in 1950.

Stelgidopteryx ruficollis serripennis (Audubon). Rough-winged Swallow. A common summer resident, breeding in the County. Like the preceding species, it nests in dirt banks on the plains.

Hirundo rustica erythrogaster Boddaert. Barn Swallow. A common summer resident. Nests about farm buildings and under bridges on the plains.

Petrochelidon pyrrhonota albifrons (Rafinesque). Northern Cliff Swallow. An abundant summer resident. Nests on cliffs, under bridges, and on farm buildings on the plains and in the lower foothills.

FAMILY CORVIDAE

Perisoreus canadensis capitalis Ridgway. Rocky Mountain Jay. A common mountain resident, breeding in the conifers.

Cyanocitta cristata cyanolephra Sutton. Western Blue Jay. Accidental. Three records. E. P. Scheutze saw one in Colorado Springs on October 5, 1902; Gadd saw one the same place on July 12, 1939; and I saw one in Ivywild on September 27, 1949.

- Cyanocitta stelleri macrolopha* Baird. Long-crested Jay. A common resident, breeding in the mountains. It nests in the conifers.
- Aphelocoma coerulescens woodhouseii* (Baird). Woodhouse's Jay. A common resident. It nests only in the pinyon-juniper and scrub oak environments.
- Pica pica hudsonia* (Sabine). American Magpie. A very common resident. Breeds along streams on the plains and in the lower foothills.
- Corvus corax sinuatus* Wagler. American Raven. A fairly common resident in the mountains. Nests on cliffs about Pike's Peak. On July 28, 1955, T. Paul Maslin and I saw a rather unusual flock of about 300 Ravens at Bottomless Pit, just below the summit of Pike's Peak.
- Corvus cryptoleucus* Couch. White-necked Raven. Aiken and Warren (1914) say, "Formerly a common resident, now unknown in the County." In Henshaw's report on the ornithology of the Wheeler Surveys (1875), Aiken mentions seeing them on the streets of Denver, and tells of a flock of a thousand that wintered on the Fountain near Colorado Springs. Certainly the great numbers of them are gone, but they still occur in the County. Gadd writes me that he has several records near Colorado Springs, particularly for the Camp Carson area. I have seen one or two per year along Fountain Creek, usually in the winter. I believe it should be listed as a rare resident, more numerous in the winter.
- Corvus brachyrhynchos hesperis* Ridgway. Western Crow. An uncommon resident. Aiken and Warren (1914) considered this bird to be rare in the County, but it has been my experience that it is too common on occasion to be considered rare. It almost certainly breeds in the County, although I have no data.
- Gymnorhinus cyanocephalus* Wied. Pinyon Jay. A common resident, largely confined to the pinyon-juniper areas. Breeds in the County.
- Nucifraga columbiana* (Wilson). Clark's Nutcracker. A fairly common resident of the mountains. Breeds there.

FAMILY PARIDAE

- Parus atricapillus garrinus* Behle. Rocky Mountain Black-capped Chickadee. This form has recently been described for this area and seems to be the chickadee for the County. A common resident, nesting in the foothills and on the plains.
- Parus gambeli gambeli* Ridgway. Mountain Chickadee. A common resident of the mountains, typically breeding at higher elevations than the preceding species.
- Parus inornatus ridgwayi* Richmond. Gray Titmouse. A fairly common resident of the pinyon-juniper area. I found it breeding at Teller Reservoir southeast of Colorado Springs on the Stone City road.
- Psaltriparus minimus plumbeus* (Baird). Lead-colored Bush-Tit. A common resident of the pinyon-junipers. Breeds in the County. Occasionally these little birds come into the middle of Colorado Springs. On February 1, 1948, I saw a flock of 40 in a tree in front of the Kappa Sigma house. On January 5, 1949, I saw another flock of 40 on the Colorado College campus in front of Palmer Hall.

FAMILY SITTIDAE

- Sitta carolinensis nelsoni* Mearns. Rocky Mountain Nuthatch. A common resident, breeding in the County, mostly in the mountains.
- Sitta canadensis* Linnaeus. Red-breasted Nuthatch. An uncommon resident, breeding in the mountains. The most I have ever seen at one time was three birds in Palmer Park on February 8, 1948. A rather seedy-looking bird came into my back yard in Colorado Springs and bathed on July 6, 1951, a time of the year when it should have been in the mountains.

Sitta pygmaea melanotis van Rossem. Black-eared Nuthatch. A common resident, confined mainly to the conifers where it breeds.

FAMILY CERTHIIDAE

Certhia familiaris montana Ridgway. Rocky Mountain Creeper. An uncommon resident, breeding in the mountains. Seen on the plains in the winter.

FAMILY CINCLIDAE

Cinclus mexicanus unicolor Bonaparte. Dipper. An uncommon resident of the mountains and foothills. Breeds in the County along streams.

FAMILY TROGLODYTIDAE

Troglodytes aëdon parkmanii Audubon. Western House Wren. A very common summer resident. Breeds in the County. Nests from the plains to timberline, mainly in cavities.

Troglodytes troglodytes pacificus Baird. Western Winter Wren. In James' account of the Long expedition, one of Thomas Say's notes gives a list of birds observed along Fountain Creek at Manitou Springs. The Winter Wren is included, but the record is rather puzzling as this is the only one for the County and one of very few for this part of the State. It is even more unusual that the date was July 12 (in 1820), and it seems likely that it was a House Wren observed. It may be significant that the first Winter Wren (the Eastern) was not described until 1819, and the Long Expedition was in the field during the years 1819-1820. The present race of the Winter Wren was described in 1864.

Thryomanes bewickii eremophilus Oberholser. Baird's Wren. Rare. Prior to 1950, there was only one record for the County, a specimen taken by Aiken at Colorado Springs on May 1, 1879. On April 2, 1950, two birds appeared on the Bates Ranch just south of Colorado Springs and one proceeded to sing beautifully for many days. The melodious song could be heard for more than a half mile. The bird continued to sing until April 22, at which time both abruptly disappeared, and were not seen again. It is of interest that the birds inhabited a marshy area during this period, very unlike their normal arid habitat.

Telmatoodytes palustris dissæptus (Bangs). Prairie Marsh Wren.

Telmatoodytes palustris plesius (Oberholser). Western Marsh Wren. The status of these two races of the Long-billed Marsh Wren in the County is in doubt. There are only two specimens of each in the Collection, and they are inseparable in the field. On the basis of distribution, the situation in other parts of the State, and the few skins available, it seems that the Prairie Marsh Wren is a rare winter resident and the Western is the uncommon summer resident, breeding in the County in marshes on the plains. I have several spring and summer sight records, and I found a nest at the Fountain Valley School in the late spring of 1948.

Catherpes mexicanus conspersus Ridgway. Canyon Wren. An uncommon resident, breeding in rocky situations (mainly cliffs) on the plains and lower foothills.

Salpinctes obsoletus obsoletus (Say). Common Rock Wren. A common summer resident. A few winter. I have a record for December 27, 1949, at Ivywild. Breeds from the plains to timberline, occasionally just above timberline.

FAMILY MIMIDAE

Mimus polyglottos leucopterus (Vigors). Western Mockingbird. A fairly common summer resident. Breeds in the County, usually in deciduous growth along plains streams. A few winter occasionally. Gadd has a date of November 5, 1940, and F. Martin Brown told me that one wintered at the Fountain Valley School during 1955-1956.

- Dumetella carolinensis* (Linnaeus). Catbird. A common summer resident. Abundant in the residential sections of Colorado Springs. Confined to the plains.
- Taxostoma rufum longicauda* (Baird). Western Brown Thrasher. A fairly common summer resident, especially in the residential areas of Colorado Springs. F. Martin Brown has a record of a wintering individual at the Fountain Valley School during 1955-1956. Breeds on the plains only.
- Toxostoma bendirei* (Coues). Bendire's Thrasher. Accidental. There is but one record for the County and the State, a specimen collected just east of Colorado Springs at Austin Bluffs by Allen and Brewster on May 8, 1882. (1883).
- Oreoscoptes montanus* (Townsend). Sage Thrasher. An uncommon migrant and rare summer resident. It was first observed by Allen and Brewster in the spring of 1882, and several were collected. Most of my dates are fall dates, and, although I have no data, I suspect that the bird breeds in the County in the arid southwestern portion.

FAMILY TURDIDAE

- Turdus migratorius migratorius* Linnaeus. Eastern Robin.
- Turdus migratorius propinquus* Ridgway. Western Robin. El Paso County is at the western edge of a zone of intergradation between the eastern and western forms of the robin. The common, breeding summer resident is mainly the Western Robin, which becomes an uncommon winter visitant in the form of migrants from the north and northeast. The eastern bird is represented by occasional migrants and breeding birds, and there is a good proportion of intergrades among the local breeding population and in the migratory flocks. Robins are found nesting from the plains to timberline.
- Hylocichla mustelina* (Gmelin). Wood Thrush. Accidental. One record for the County, the second reported for the State. On October 15, 1955, a Wood Thrush flew at a window of a residence in Colorado Springs and was killed. It was given to Dr. Robert M. Stabler of Colorado College by Ruth Nelson and is now in his possession.
- Hylocichla guttata guttata* (Pallas). Alaska Hermit Thrush. An uncommon migrant. There are a number of specimens in the Collection.
- Hylocichla guttata auduboni* (Baird). Audubon's Hermit Thrush. A common summer resident of the higher mountains, breeding in the spruces there.
- Hylocichla ustulata swainsoni* (Tschudi). Olive-backed Thrush. An uncommon migrant and summer resident. Breeds in the County, nesting in deciduous growth along mountain streams.
- Hylocichla fuscescens salicicola* Ridgway. Willow Thrush. An uncommon migrant and summer resident. Breeds in the lower mountains and foothills of the County.
- Sialia sialis sialis* (Linnaeus). Eastern Bluebird. An uncommon summer resident. Aiken considered this bird rare, as there had been only one specimen for the County until 1929. At that time another bird was found dead in Colorado Springs. In the last twenty years, the bird has moved in from the East until it is fairly common and breeds in the County. For several years I found all three species of bluebirds nesting in close proximity to each other in the Rock Creek area on the Canyon City road south of Colorado Springs. I have not noticed any nesting about human habitations, as it does farther east.
- Sialia mexicana bairdi* Ridgway. Chestnut-backed Bluebird. A common summer resident, breeding in the County. Especially common on the Arkansas Divide. It is usually associated with the Ponderosa Pine, although I have found a few inhabiting flicker holes in cottonwoods.
- Sialia currucoides* (Bechstein). Mountain Bluebird. An abundant summer resident, breeding in the County. However, I have records for every month of the year. It is typical of the plains, foothills, and lower mountains, nesting in cavities, as do the other bluebirds.

Myadestes townsendi townsendi (Audubon). Townsend's Solitaire. A common resident, breeding in the higher mountains and wintering at lower elevations. It is a ground-nester.

FAMILY SYLVIIDAE

Poliopitula caerulea amoenissima Grinnell. Western Gnatcatcher. An uncommon summer resident.

Breeds in the extreme southwestern part of the County in the pinyon-junipers, where I found several nests. Aiken listed it as rare, but it is more common now.

Regulus satrapa olivaceus Baird. Western Golden-crowned Kinglet. A rare resident. May breed in the County, although there are no data. I have several summer dates for the mountains.

Regulus calendula calendula (Linnaeus). Eastern Ruby-crowned Kinglet. A common resident, breeding in the County, usually in the spruces of the higher mountains. Less common in winter.

FAMILY MOTACILLIDAE

Anthus spinoletta allicola Todd. Rocky Mountain Pipit. A common summer resident of the alpine tundra and a common migrant on the plains.

Anthus spragueii (Audubon). Sprague's Pipit. One record for the County. My notes for March 20, 1949, at Johnson Reservoir, read "a pipit with a heavily striped back and meager breast markings . . ." However, this bird has to pass through eastern Colorado in its migration and has probably just been overlooked in the past.

FAMILY BOMBYCILLIDAE

Bombycilla garrulus pallidiceps Reichenow. Bohemian Waxwing. An irregular winter visitant. Some winters pass with no sign of these northern birds. They have been recorded for the winters of 1871-1872, 1879-1880, and 1910-1911, according to Aiken. They were present constantly in Colorado Springs from December, 1930, to March, 1931 (Bergtold, 1931). During my residence in the area, they appeared in 1948, 1950, and 1952. I collected a series at Manitou in 1950.

Bombycilla cedrorum Vieillot. Cedar Waxwing. A rare migrant and winter resident. I have a few summer dates but the birds did not appear to be breeding.

FAMILY LANIIDAE

Lanius excubitor invictus Grinnell. Northwestern Shrike. An uncommon winter visitant.

Lanius ludovicianus excubitorides Swainson. White-rumped Shrike. A common summer resident, breeding in the County. It often appears in waves in the spring; on April 30, 1950, I saw 30 birds in a small area near Colorado Springs. It nests in deciduous thickets along streams on the plains.

FAMILY STURNIDAE

Sturnus vulgaris vulgaris Linnaeus. Starling. A common resident, nesting in holes in trees on the plains. Breeds in the County. Since its introduction in New York City in 1890, the westward spread of this bird has been rapid. Gadd (1941) published the first record for the County, observing the bird at Johnson Reservoir on January 26, 1941. However, he has written me recently that he has a sight record for July 20, 1939, east of Colorado Springs. By 1948, it had become well established. On May 7, 1948, I found a nest with young in Monument Valley Park, the first breeding record for the County. On May 16, 1948, I found three more nests in the Fountain area. In December of 1949, I counted a flock of 66 birds in a tree in City Park, Colorado Springs.

FAMILY VIREONIDAE

- Vireo bellii bellii* Audubon. Bell's Vireo. Straggler. There is only one record for the County. On May 19, 1948, I saw two in Stratton Park near the Broadmoor area. I would hesitate to include this record based on a sight identification alone, except that the birds were singing, and the song is diagnostic and very familiar to me.
- Vireo solitarius plumbeus* Coues. Plumbeous Vireo. A common summer resident. Breeds on the plains and in the foothills of the County. On September 23, 1955, which is a rather late date, L. M. Baylor and I observed one at upper Rock Creek south of Colorado Springs.
- Vireo solitarius cassinii* Xantus. Cassin's Vireo. A rare migrant. This western form has been taken twice in the County. Alexander Wetmore collected one at Palmer Lake on September 6, 1909, and Aiken took one two miles west of Husted, north of Colorado Springs, on September 5, 1915.
- Vireo olivaceus* (Linnaeus). Red-eyed Vireo. An abundant summer resident. Breeds commonly along stream bottoms and is especially numerous in the residential areas of the County. This bird is an example of one of the more dramatic changes in the avifauna of the County. It was unknown in Aiken's day, and there are no specimens in the Collection and no published accounts of its occurrence in the County. When I arrived in Colorado Springs in 1947, it was quite common. Today it is abundant and by far the commonest of all the vireos. I have taken a number of specimens.
- Vireo gilvus swainsonii* Baird. Western Warbling Vireo. A common summer resident. Breeds in the County. Nests in deciduous growth along streams on the plains and in the foothills and mountains.

FAMILY PARULIDAE

- Mniotilta varia* (Linnaeus). Black and White Warbler. Casual. There are two records for the County. Aiken took one on Turkey Creek in the fall of 1875, and L. M. Baylor and I saw one on upper Rock Creek on September 23, 1955.
- Protonotaria citrea* (Boddaert). Prothonotary Warbler. Accidental. One record for the County, a specimen collected by B. G. Voight between Palmer Lake and Monument in May or June, 1900 (Felger, 1907). Cooke (1909) questioned this record on the basis that the habitat, dry and rocky, did not suit the bird. However, Aiken visited the location and reported that there were extensive thickets, flooded by beaver dams, producing a suitable habitat. Ridgway examined the specimen along with two others taken by the same person near Pueblo, and pronounced them to be fall specimens on the basis of bill color (Felger, *op. cit.*). There the matter stands.
- Vermivora peregrina* (Wilson). Tennessee Warbler. A rare migrant. There is but one specimen, a bird taken by Aiken on September 28, 1872. It is a fairly common migrant not far to the east of the County, especially in the fall.
- Vermivora celata orestera* Oberholser. Rocky Mountain Orange-crowned Warbler. A common migrant, one of the first warblers to arrive.
- Vermivora ruficapilla ridgwayi* van Rossem. Calaveras Warbler. As mentioned in a previous section, there is only one record for the County. Hering (1948) notes that the bird was "infrequently seen" in the Black Forest northeast of Colorado Springs.
- Vermivora virginiae* (Baird). Virginia's Warbler. A common summer resident. Breeds in the County. The first nest of this species known to science was found and described by Aiken. Apparently it is confined to the scrub oaks and/or mountain mahogany during the breeding season, nesting on the ground.

- Parula americana* (Linnaeus). Parula Warbler. Casual. One record for the County, a male collected by Aiken on Turkey Creek on May 11, 1872.
- Dendroica petechia aestiva* (Gmelin). Eastern Yellow Warbler. An abundant summer resident, breeding in the County on the plains most commonly, but also in the foothills and lower mountains.
- Dendroica caerulescens caerulescens* (Gmelin). Black-throated Blue Warbler. Cooke (1894) mentions "one specimen at Colorado Springs" but does not tell in which collection it was. The bird has never been located.
- Dendroica coronata coronata* (Linnaeus). Myrtle Warbler. A common migrant. I have noticed some wintering individuals almost every winter, subsisting on the scale insects infesting the elm trees on the Colorado College campus.
- Dendroica auduboni auduboni* (Townsend). Audubon's Warbler. A very common migrant and summer resident, breeding in conifers in the mountains. There are four hybrids of these last two species in the Aiken Collection taken in the County. They are commented upon elsewhere. (Alexander, 1945)
- Dendroica nigrescens* (Townsend). Black-throated Gray Warbler. A fairly common summer resident of the pinyon-juniper, breeding there. It is possible that it breeds as close to Colorado Springs as Rock Creek, since I have seen males singing there in May and June.
- Dendroica townsendi* (Townsend). Townsend's Warbler. The first record for this species is one I saw in the aspens near Glen Cove, half way up Pike's Peak in the fall of 1948 (September). Since then I have noted it on several occasions in good numbers, always in the fall and always in the mountains. It should be classed as a fairly common fall migrant.
- Dendroica castanea* (Wilson). Bay-breasted Warbler. Casual. There is only one record for the County, the first for the State of Colorado. Andrew Spielman and I saw one in some poplar trees at the Fountain Valley School on May 12, 1951. It was an adult male in high plumage, but although I had my collecting gun with me, by the time permission to collect was secured from the School authorities, the bird had left.
- Dendroica striata* (Forster). Black-poll Warbler. An uncommon spring migrant. There seem to be no fall dates. Minot (1880) called it a "local summer resident about Seven Lakes" (on Pike's Peak). Aiken recommended that this record be disregarded, as it was obviously in error. These birds migrate through the city of Colorado Springs and may be seen in the deciduous trees lining the avenues.
- Seiurus aurocapillus cinereus* A. H. Miller. Gray Oven-bird. A rare summer resident, breeding just outside the city limits of Colorado Springs. Until 1942, there had been only one record for the County, one of two for the State. This was a female taken by Aiken at Ramah, northeast of Colorado Springs, June 5, 1898. On May 31, 1942, Gadd, in company with Dr. Lewis Abbott of Colorado College, saw two and heard three or four in Stratton Park, a strip of scrub oak, yellow pine, and deciduous growth between the mouths of North and South Cheyenne Canyons, just southwest of Colorado Springs. On May 16, 1948, I found two birds at Stratton Park, and on the 19th they were singing. On June 1, I found a nest, and every summer thereafter I found them breeding in this restricted locality of a few acres. This is one of the two known breeding areas in the State, the other being near the Castlewood Dam on the north side of the Arkansas Divide, not far north of the County line.
- Seiurus noveboracensis notabilis* Ridgway. Grinnell's Water-Thrush. An uncommon but regular migrant. I have seen a few individuals every spring in the County. Gadd has a record for October 28, 1939, a very late date.
- Oporornis tolmiei* (Townsend). Macgillivray's Warbler. A common migrant and summer resident, inhabiting stream banks from the lower foothills to the higher mountains.

- Geothlypis trichas occidentalis* Brewster. Western Yellow-throat. An abundant summer resident, breeding in the County in marshy areas on the plains and in the lower foothills. A bird collected by Aiken on May 31, 1898, was determined by Ridgway to be *G. t. trichas*, the Maryland Yellowthroat (Aiken, 1900), but I have been unable to locate the specimen.
- Icteria virens auricollis* (Lichtenstein). Long-tailed Chat. A fairly common summer resident. Breeds in the County in the brush along streams on the plains and in the lower foothills in the southwestern part of the County mainly.
- Wilsonia pusilla pileolata* (Pallas). Northern Pileolated Warbler. A common migrant and summer resident, breeding in the mountains in wet areas of deciduous growth. Two specimens in the Collection labeled "*W. p. pusilla*", Wilson's Warbler, and collected at Pike's Peak and Ramah in May and July of 1899, have the added notation "nearer *pileolata*" in Aiken's hand.
- Setophaga ruticilla* (Linnaeus). American Redstart. A rare migrant. There are four specimens in the Collection, and Aiken saw a few each year in the early days. Allen saw it near Colorado Springs in August of 1871, and Allen and Brewster (1883) saw it in the spring of 1882. The only record for recent years was a male seen on May 11, 1941, along the Fountain Creek bottoms by Gadd. The fact that I have no records for the County after four years of intensive field work may indicate that it is decreasing. Minot's statement (1880) that "A few are summer residents about the creek below" (in the mountains) is open to question.

FAMILY PLOCEIDAE

- Passer domesticus domesticus* (Linnaeus). English Sparrow. A common resident about inhabited areas. According to Aiken, this bird reached Colorado Springs in the spring of 1895.

FAMILY ICTERIDAE

- Dolichonyx oryzivorus* (Linnaeus). Bobolink. A rare migrant (formerly). There are a total of 11 records, one of which is a specimen in the Collection. All are May and September dates. There have been no records since 1913.
- Sturnella neglecta neglecta* Audubon. Western Meadowlark. A common summer resident, with many wintering individuals. Breeds in the County.
- Xanthocephalus xanthocephalus* (Bonaparte). Yellow-headed Blackbird. A common summer resident. Breeds in the County, in locally suitable areas (marshy places). Aiken found it breeding only at Skinner's Ranch, but an increase in marshy places in the County has resulted in the establishment of more breeding colonies on the plains.
- Agelaius phoeniceus fortis* Ridgway. Thick-billed Red-wing. A common resident of marshes on the plains. The winter population is probably a different group of birds from farther north.
- Icterus bullockii bullockii* (Swainson). Bullock's Oriole. A common summer resident in cottonwoods on the plains.
- Euphagus carolinus carolinus* (Müller). Rusty Blackbird. Rare. There is only one record for the County. Aiken saw three and collected two near Johnson Reservoir on January 15, 1908. One of these specimens is in the Collection. This is the only Colorado record south of the Arkansas Divide.
- Euphagus cyanocephalus* (Wagler). Brewer's Blackbird. A common summer resident. Breeds in the County usually in low bushes on the plains. I have no winter records.
- Quiscalus quiscula versicolor* Vieillot. Bronzed Grackle. A fairly common summer resident. Breeds in the County along stream bottoms and in towns on the plains. I have an early date of April 5, 1952.
- Molothrus ater ater* (Boddaert). Eastern Cowbird. A common summer resident. Breeds in the

County, parasitizing several other species on the plains. Typical of cultivated areas and feed-lots.

FAMILY THRAUPIDAE

Piranga ludoviciana (Wilson). Western Tanager. A common migrant and summer resident. Breeds in the mountains, nesting in conifers in the foothills and lower mountains.

Piranga olivacea (Gmelin). Scarlet Tanager. Accidental. One specimen was taken at Palmer Lake by W. C. Ferrill on May 17, 1902 (Smith, 1903). There is a sight record of several in the Palmer Lake region for May of 1909.

FAMILY FRINGILLIDAE

Peucaicus ludovicianus (Linnaeus). Rose-breasted Grosbeak. Accidental. F. Martin Brown of the Fountain Valley School reports seeing it "recently" about the School. I have heard from residents of Ivywild of another occurrence in the 1930's. Bailey and Niedrach mention a record of 1925 (1938a).

Peucaicus melanocephalus melanocephalus (Swainson). Rocky Mountain Grosbeak. A common summer resident. Breeds in the County in shrubby situations at the edge of the plains and in the foothills.

Guiraca caerulea interfusa Dwight and Griscom. Western Blue Grosbeak. An uncommon summer resident. Although there are no data, it almost certainly breeds in the County. In addition to Aiken's records and five skins in the Collection, Gadd has some recent records for 1941 and 1942 (June, July, and August). I have perhaps a half-dozen summer records.

Passerina cyanea (Linnaeus). Indigo Bunting. There is only one record for this eastern bird, a male collected by Aiken on May 18, 1872, on Turkey Creek at his ranch.

Passerina amoena (Say). Lazuli Bunting. A common summer resident, breeding in the County in shrubby growth on the plains and in the lower foothills.

Spiza americana (Gmelin). Dickcissel. This is a bird of extremely irregular occurrence, occurring rather commonly and breeding during one season and then disappearing for several to ten years. There is only one specimen in the Collection, taken on August 29, 1897, at the Broadmoor Ranch. Gadd saw a pair in July of 1941 at Johnson Reservoir and again in July of the following year in exactly the same weed patch. My own experience with the bird in the County was during the summer of 1948, when three pairs nested at the intersection of Highways 85, 87, and 115 near the Broadmoor area. This was coincident with a general influx in 1948 into eastern Colorado which saw them nesting commonly near Denver and Littleton. Aiken reported that Allen called them "frequent near Colorado City" (West Colorado Springs) and expressed surprise that it had only been seen or taken once between then (1871) and 1914. However, we know now that this apparently is normal.

Hesperiphona vespertina brooksi Grinnell. Western Evening Grosbeak. An irregular resident, periodically common. Undoubtedly breeds in the County in the mountains, but there are no data. During the winter of 1950-1951, approximately 500 birds wintered in Colorado Springs, the number ascertained by banding. All but two pairs left abruptly about the middle of June (17th) and by the 23rd all were gone. On the 23rd of July, a few came back again, and on August 7 a female appeared at my banding station feeding full-grown young.

Carpodacus cassinii Baird. Cassin's Purple Finch. An irregular, uncommon resident. Probably breeds in conifers in the higher mountains of the County, although there are no nesting records.

Carpodacus mexicanus frontalis (Say). Common House Finch. An abundant resident. Seems to prefer inhabited areas on the plains and in the lower foothills.

- Pinicola enucleator montana* Ridgway. Rocky Mountain Pine Grosbeak. An uncommon mountain resident. Breeds in the County in the spruce-fir of the highest mountains.
- Leucosticte tephrocotis littoralis* Baird. Hepburn's Rosy Finch.
- Leucosticte tephrocotis tephrocalis* (Swainson). Gray-crowned Rosy Finch.
- Leucosticte alata* Ridgway. Black Rosy Finch.
- Leucosticte australis* Ridgway. Brown-capped Rosy Finch. The preceding four birds may be considered together, as they almost invariably appear together in the winter. The first three breed to the north and west of the State, migrating to Colorado in the winter and mixing in flocks with the last species. They may be considered uncommon winter visitants. The last species breeds in the County on the alpine tundra and is a common resident. All four are confined to the mountains and the foothills in the winter. The Black Rosy Finch was first described from a series taken by Aiken near Canyon City, just south of the County in April of 1874. The occurrence of all four forms is rather irregular, the Black Rosy Finch being the least common.
- Acanthis flammea flammea* (Linnaeus). Common Redpoll. A rare winter visitant. Arnold (1912) reported a wintering flock of about 25 in Colorado Springs in 1910-1911. There have been no records in recent years.
- Spinus pinus pinus* (Wilson). Northern Pine Siskin. A common resident. Breeds in the County in evergreens on the plains to the lower Canadian zone.
- Spinus tristis tristis* (Linnaeus). Eastern Goldfinch.
- Spinus tristis pallidus* Mearns. Pale Goldfinch. Once again we have a situation similar to that of the Robins, with a more common resident form which breeds, and a race from farther east which appears occasionally and intergrades with the resident form. The Pale Goldfinch is a common resident, breeding in the County, wintering in good numbers. The Eastern Goldfinch, according to specimen dates, appears in the spring and summer in small numbers, and some breed, either among themselves or with the Pale Goldfinch. Apparently they do not winter.
- Spinus psaltria psaltria* (Say). Arkansas Goldfinch. A common summer resident. Breeds in the County on the plains and in the lower foothills.
- Loxia curvirostra benti* Griscom. Bent's Crossbill. An uncommon resident of irregular occurrence. Breeds in the County usually in the Ponderosa Pine. The specimens in the Collection seem to belong to this newly accepted race, with the exception of one large-billed bird which may be *L. c. stricklandi* Ridgway, the Mexican Crossbill.
- Chlorura chlorura* (Audubon). Green-tailed Towhee. A common summer resident. Breeds in the County on brushy hillsides of the Transition Zone.
- Pipilo erythrophthalmus arcticus* (Swainson). Arctic Towhee. A common winter resident.
- Pipilo erythrophthalmus montanus* Swarth. Spurred Towhee. A common summer resident, breeding in the County in the scrub oaks and Mountain Mahogany of the Transition Zone. A few may winter.
- Pipilo fuscus mesatus* Oberholser. Colorado Brown Towhee. An uncommon resident, breeding in the lower canyons of the southwestern part of the County. Less common in the winter. I found a pair nesting on Rock Creek in the spring of 1950, just where the foothills begin.
- Calamospiza melanocorys* Stejneger. Lark Bunting. A common summer resident, breeding on the plains. On July 26, 1951, a male came into my back yard in the middle of the city of Colorado Springs and fed on bird seed, a rather unlikely place for a Lark Bunting.
- Passerculus sandwichensis anthinus* Bonaparte. Western Savannah Sparrow.
- Passerculus sandwichensis nevadensis* Grinnell. Nevada Savannah Sparrow. The races of the Savannah Sparrow which occur in Colorado are in need of clarification. According to the

- latest revisions, the Western is an uncommon migrant, and the Nevada is the common summer resident, breeding in the County in moist meadows on the plains, usually near ponds.
- Ammodramus savannarum perpallidus* (Coues). Western Grasshopper Sparrow. A very irregular summer resident, breeding locally in the County. Aiken listed this bird as "a rare autumn migrant, not observed in spring". There are four specimens in the Collection taken in July, August, and September, 1897, and in July, 1898. The only other records are for the summer of 1947, when I found a few pairs nesting just east of Prospect Lake in Colorado Springs and a few more pairs in the same place the following summer of 1948, also nesting. I have found since then, in other parts of the State, that this species exhibits a sporadic influx similar to that of the Dickcissel, and it is probable that Aiken's specimens were taken during one of these periods. He was not aware of the fact that nesting does not commence until July and assumed they were fall migrants. When they arrive to nest, they are very common, but may not be seen again for many years.
- Ammodramus bairdii* (Audubon). Baird's Sparrow. Has not been seen or taken in the County since 1916. This is the mystery bird of El Paso County. On October 5, 1872, Aiken collected one 11 miles east of Fountain, the first example of this species to be taken since the original description by Audubon in 1844 based on a specimen taken at old Fort Union, North Dakota. Aiken described it as a new species, *Centronyx ochrocephalus* (Aiken, 1873) since it was in a different plumage from the bird described by Audubon. Ridgway also examined the bird and agreed that it was a new species. It was subsequently determined to be Baird's Sparrow, practically a rediscovery of the species after almost 30 years, and relegated to the synonymy. It appeared again in 1873, and in such numbers during 1897 and 1898 that Aiken was able to collect many specimens. There are still ten in the Collection. On the 29th of August, 1916, Warren collected a specimen near Colorado Springs. This is the last record for the County, with no sight records or specimens taken in 40 years.
- Poocetes gramineus confinis* Baird. Western Vesper Sparrow. An abundant summer resident. Breeds in the County in cleared fields on the plains and in the foothills.
- Chondestes grammacus strigatus* Swainson. Western Lark Sparrow. A very common summer resident, breeding on the plains.
- Junco aikeni* Ridgway. White-winged Junco. A common winter visitant, varying somewhat in abundance from year to year. El Paso County is the type locality, Aiken having collected the first examples known to science at Barnes's Canyon in 1871. It was described by Ridgway in 1873. (1873)
- Junco hyemalis hyemalis* (Linnaeus). Slate-colored Junco. An uncommon winter visitant.
- Junco oreganus shufeldti* Coale. Shufeldt's Junco. A fairly common winter visitant.
- Junco oreganus montanus* Ridgway. Montana Junco. A fairly common winter visitant.
- Junco oreganus mearnsi* Ridgway. Pink-sided Junco. A common winter resident. May be abundant at times. There are over 100 specimens in the Collection.
- Junco caniceps caniceps* (Woodhouse). Gray-headed Junco. A common resident, breeding from the foothills to the highest mountains and on the Arkansas Divide.
- Spizella arborea ochracea* Brewster. Western Tree Sparrow. A common winter visitant, abundant at times.
- Spizella passerina arizonae* Coues. Western Chipping Sparrow. An abundant summer resident, breeding in the County from the plains to the lower mountains.
- Spizella pallida* (Swainson). Clay-colored Sparrow. An uncommon migrant. Should nest in the County, but there are no records.
- Spizella breweri breweri* Cassin. Brewer's Sparrow. An uncommon migrant and summer resident, a few breeding in the County about scrub oak and Mountain Mahogany.

- Zonotrichia querula* (Nuttall). Harris's Sparrow. Rare. There are two records for the County. Aiken collected one in the Fountain Valley at Buttes in January, 1908, and Dr. Lloyd Shaw and several other people saw one in Monument Valley Park in February, 1914.
- Zonotrichia leucophrys leucophrys* (Forster). White-crowned Sparrow. A common summer resident, breeding in the mountains near timberline. Arrives in the spring after the following species has moved on. A few may winter.
- Zonotrichia leucophrys gambelii* (Nuttall). Gambel's Sparrow. A common migrant and occasional winter visitant.
- Zonotrichia albicollis* (Gmelin). White-throated Sparrow. One record for the County from F. Martin Brown, who told me that one wintered through 1955-1956 at the Fountain Valley School.
- Passerella iliaca schistacea* Baird. Slate-colored Fox Sparrow. Rare. Two records for the County. The first is a specimen taken by Aiken at the Portland Mill in southwest Colorado Springs in April of 1923. The second is a record by Gadd on August 26, 1939, who saw one at Johnson Reservoir. He also wrote me that "Denver Campbell took a nest in a mountain meadow near his home near Divide on June 23, 1940." (This is just northwest of the County in Teller County and is one of only a few nesting records for the State.)
- Melospiza lincolni alticola* (Miller and McCabe). Montane Lincoln's Sparrow. A common summer resident, breeding in the higher mountain meadows.
- Melospiza georgiana ericrypta* Oberholser. Western Swamp Sparrow. Accidental. One record for the County, a field identification by Aiken near the Broadmoor Ranch on August 8, 1897.
- Melospiza melodia juddi* Bishop. Dakota Song Sparrow. Accidental. There is a specimen in the Collection taken by Aiken near Colorado Springs on March 20, 1898, which was diagnosed by Oberholser as of this subspecies. Another one taken at Roswell on March 29, 1925, by Aiken is also of this race. These are the only two records for the County.
- Melospiza melodia montana* Henshaw. Mountain Song Sparrow. A fairly common resident, breeding in the County from marshy areas on the plains to high mountain meadows.
- Rhynchophanes mccownii* (Lawrence). McCown's Longspur. An uncommon, irregular winter visitant.
- Calcarius lapponicus alascensis* Ridgway. Alaska Longspur. An irregular winter visitant. On January 28, 1949, I saw a flock of 30 mixed with Horned Larks, east of Fountain.
- Calcarius ornatus* (Townsend). Chestnut-collared Longspur. A common but irregular winter visitant.
- Plectrophenax nivalis nivalis* (Linnaeus). Eastern Snow-Bunting. Accidental. Aiken took a pair at Colorado Springs in 1874, the only record for the County and one of few for the State.

DISCUSSION

ANALYSIS OF CHANGES IN AVIFAUNA

As may be inferred from the preceding annotated list, there have been a number of changes in the status of the birds occurring in El Paso County during the last fifty to one hundred years. Some are major changes; others are minor in nature. They may be divided into two major categories: those brought about by man and his activities, and those not brought about by man. In the discussion below, an attempt has been made to compensate for those changes which may be directly attributed to the greater number of persons making observations in recent years, the longer period of investigation involved, and the consequent

better coverage of the study area. The purpose is to contrast the true status "then" with the true status "now".

CHANGES BROUGHT ABOUT BY MAN

1. *An increase in abundance.* Among those birds exhibiting an increase in abundance, outstanding are those associated with aquatic or semi-aquatic environments. They are the waterfowl, shorebirds, gulls, rails, blackbirds, and other marsh-inhabiting species. Aiken did not list the Horned and Western Grebes, which may be observed now commonly during every migration. To Aiken, the Cormorant was rare, but it is now fairly common. There had been only two records for the Black-crowned Night Heron up to the turn of the century; now it is observed every year and probably nests. Formerly the Mallard and Gadwall were only migrants. Now they are summer residents and nest in the County. The Ring-necked Duck is now a regular migrant, whereas formerly it was rare. The same holds true for the American Goldeneye. Among the shorebirds, the Semipalmated Plover was unknown to Aiken and is now a rare migrant, increasing every year, the same situation as with the Marbled Godwit. The Greater Yellowlegs was formerly rare and is now a regular migrant. The Avocet now breeds commonly, a comparatively recent development.

Aiken surprisingly listed only two species of gulls, the Ring-billed and Bonaparte's. Now the Herring Gull occurs, and the Ring-billed has changed from a migrant to an uncommon resident. Sabine's Gull has been added to the list. Franklin's Gull, unknown to Aiken and to the State in the early days, shows one of the most phenomenal changes of all, as has been pointed out in the annotated list. In occurrence it has increased from complete absence to an uncommon late summer and fall migrant to an abundant spring and fall migrant in the space of about forty years. Forster's Tern was rare and has become a regular migrant and summer resident and may breed.

Among the marsh-breeders, the blackbirds have increased over the years, especially the Yellow-headed Blackbird. To Aiken, this bird was a rare breeder, but it is now a common breeding bird of the County, with many well-established colonies. The rails and Yellowthroats have also become more common.

The changes pointed out for the foregoing groups of birds may be attributed almost entirely to man's realization of the importance of water in this arid or semi-arid region. Johnson, Little Johnson, Teller, and Stratton Reservoirs are significant bodies of water created by man where no water existed before. Prospect Lake in Colorado Springs is an artificial lake. Numerous farm ponds now dot the plains. These bodies of water provide food and a natural resting place for these birds on migration as well as nesting areas in the marshy places usually associated with them. Indirectly, the water contained in them has affected some

birds through the agriculture it has made possible. It is a common sight to see hundreds of gulls following the plow and feeding on exposed invertebrate life where virgin plains once existed.

Unfortunately, man is also careless about the use and conservation of water, and his agricultural methods have resulted sometimes in badly eroded gullies which, ironically, have also provided a nesting place for certain birds. The Rough-winged Swallow, the Bank Swallow and the Kingfisher have increased their numbers at least partly because of the exposure of dirt banks which did not exist before the advent of the white man.

In his desire for green surroundings, man has used water to create deciduous woodlands about his habitations. To the migrating bird, Colorado Springs, an especially well-planted city, appears as a sea of green from the air where not many years ago there was nothing but cactus, yucca, and buffalo grass. This change has had a considerable impact on some of the passerine birds, such as the Red-eyed Vireo. This bird was unknown in the early days of the County and is now an abundant breeder in the deciduous trees planted by man. Its habitat to the east has been duplicated artificially in the arid West. The Brown Thrasher and Bronzed Grackle have increased about the towns in recent years for the same reason.

Finally, among those species showing an increase over the years due to man's activity, the introduced birds should be mentioned. The Pheasant had not become established by 1912, but it is well established now, occupying a niche created by man along the hedgerows and cultivated bottomlands. The English Sparrow became a permanent nuisance shortly after its arrival in 1895, and the Starling is now common since arriving in 1939. In its westward spread, the latter bird has taken to nesting in holes in trees, and how long it will be before it becomes a pest around public buildings remains to be seen.

2. *A decrease in abundance.* The changes wrought by man are not always beneficial. One of these is a depletion in the numbers of certain of our native birds, as can be demonstrated in El Paso County. Perhaps the greatest factor in this diminution of numbers is hunting pressure, for the boy or man with a gun is still the worst and sometimes the only enemy of certain birds. Among the groups most affected are the game birds and the birds of prey. The Canvasback has been greatly reduced in numbers throughout its range owing to excessive shooting and destruction of its nesting areas in other parts of the continent, and the story has been repeated in the study area. Formerly it was fairly common, but it has been steadily decreasing until now it is considered rare in the County. Unfortunately, it is thought to be a delicacy and is greatly sought after by local gunners, and the few that appear each year are lucky to pass through the area unmolested.

The Wild Turkey is another example of a game bird adversely affected by hunt-

ing pressure. It was formerly common along the foothills in the County. Turkey Creek was named for the abundance of this bird along its banks. Because of its great size, the turkey did not last long after the advent of the white man. It had been wiped out by 1873, before the region had become well settled. The Prairie Sharp-tailed Grouse suffered the same fate.

The birds of prey present tempting targets to indiscriminate gunners. The Ferruginous Rough-leg, a common resident in Aiken's day is now a rare resident. Concerning the Bald Eagle, Aiken says: "Formerly quite common, but have been killed off." The owls have suffered rather severely at the hands of hunters. Both the Long-eared and the Short-eared Owls, formerly common, are now rare.

Another factor tending to bring about a decrease in abundance of certain species and which may be attributed to the activities of man is grazing. Many ground-nesting species which formerly had the plains to themselves are now pre-empted by cattle. Outstanding among these is the Mountain Plover, which lays its eggs on the virgin plains. It was a common nester on the plains of the County in the early days, within sight of the city of Colorado Springs. Overgrazing by cattle, or their mere presence, seems effectively to limit its breeding.

One species of bird occurring in the County has shown a curious increase in abundance since the very early days, followed by a decrease almost to the point of rarity. This is the White-necked Raven. At the time of the early explorations, it was rare in the County. Later in the nineteenth century it had become so abundant that Aiken mentioned seeing them on the streets of Denver and noted a flock of one thousand wintering on the Fountain. He has offered an explanation based on the activities of man which seems so logical that it seems worth repeating here. He says:

Some strong incentive was necessary to have induced these birds to wander northward from their native range in western Texas and New Mexico. This was offered by the slaughter and extermination of the buffalo herds on the western plains which was going on during the late sixties and early seventies. Pioneer settlers were pushing ahead of the railroads; transportation was by teams, and travelers camped along the roads and fed grain to their stock. The Ravens, probably first attracted by the buffalo carcasses that strewed the northern plains later followed along the routes of team travel and fed on scattered grain left by the campers. By 1874 the buffalo were nearly gone; completed railroads had put the wagon freighters out of business; frequent houses along most roads provided shelter for travelers and camping became unnecessary; the food supply of the White-necked Raven was curtailed and the bird presently retired to its former habitat.

These, then, are the major changes in the avifauna of the County which may directly or indirectly be attributed to man or his activities.

CHANGES NOT BROUGHT ABOUT BY MAN

It is usually not difficult to find reasons for the changes in status of the avifauna brought about by man because of man's profound influence in altering the environ-

ment. He has plowed up the virgin plains, watered the desert, overgrazed the grassland, created lakes and planted new vegetation. In some cases he has introduced new foreign species while eliminating the native species by wholesale slaughter. To find causes for changes in status not attributable to man is more difficult, for they are usually more subtle and may depend on a multitude of factors. Moreover, they may take place against an increasing gradient of human influence.

Early observations in Colorado seem to indicate that Lewis's Woodpecker was a mountain bird, being typical of the Transition Zone above the plains. Cary (1911) listed it as exclusively a Transition Zone breeder. Warren (1908) showed records from the mountains and Aiken and Warren (1914) said "... probably in the breeding season most, if not all, are found in the yellow pines..." In recent years this bird seems to have adopted a plains habitat, particularly along stream bottoms there. As a matter of fact, I have rarely seen a Lewis's Woodpecker in the mountains. This shift in range or habitat is a rather puzzling problem. I know of no species which might have evicted it from its former nesting areas, and, conversely, there seem to be no cavity nesters on the plains which have recently decreased in abundance, making room for this woodpecker. Perhaps it is a change in the distribution of some insects, as a good proportion of the food of this bird is from this source.

The Texas Woodpecker, a race of the Ladder-backed, has been extending its range into El Paso County from the south and southeast (Gadd, 1941) and now breeds in the County. Once again, the reasons for this range extension can only be guessed at. A possible explanation may lie in the fact that since this race is one of four very closely related forms, the group may be so new, evolutionarily speaking, that it is actively spreading out at this time.

Another piciform species, Batchelder's Woodpecker, now breeds commonly, although Aiken and Warren (*op. cit.*) said, "No breeding records known for the County." I am at a loss to explain this change except on the basis of its having been overlooked in the earlier days. This seems to be the most likely explanation, since no such change has been noted over the years in adjacent areas.

The Horned Lark has exhibited another possible change not brought about by man. It breeds abundantly on the plains and also on the alpine tundra of Pike's Peak. However, Aiken and Warren (*op. cit.*) stated, "In other parts of the State they are also found above timberline in summer, breeding there, but we do not have any records of this sort for El Paso County." Either the bird has extended its range altitudinally in this region or insufficient field work in the early days resulted in its being overlooked on the County tundra. It seems more likely that the latter is true.

The Eastern Bluebird, for which Aiken had only one record, is now a breeding

resident, having come in from farther east. At first glance, this change might seem attributable to man's settlement of the West, since the bird is normally associated with human habitations farther east. However, so far it has shunned inhabited areas in El Paso County, nesting in dead Ponderosa Pine and cottonwood stubs. It has occurred to me that increasing competition for nesting sites with the English Sparrow and the European Starling has impelled it to seek new areas in the West, where these introduced birds are not so numerous.

Finally, the Ovenbird, which did not occur in the County until the turn of the century, and then only once, now breeds near Colorado Springs. When I first found this species nesting in Stratton Park, it was thought to be monotypic, and it took a considerable stretch of the imagination to believe that, in extending its range, it had found the hot, dry Ponderosa Pine and scrub oak woods a suitable substitute for the moist beech and bracken and other similar-type woodlands of its eastern habitat. Since then, a new race has been described for the Rocky Mountain region, to which the Colorado bird apparently belongs. However, it was described more from migrant specimens than breeding birds, and it remains to be seen if the race will survive the scrutiny of other taxonomists. If it does, the occurrence of this bird in the County will not represent a shift in range but merely another breeding locality of the Rocky Mountain form.

AVIFAUNAL ELEMENTS AND THEIR GEOGRAPHIC AFFINITIES

The newcomer to this part of Colorado is immediately struck by the extraordinary diversity of bird life present. This is largely due to a fortuitous combination of latitude, longitude, and great ranges of elevation, precipitation and soil types, resulting in extremely diverse vegetation types. Every life zone present in Colorado is represented in this rather circumscribed area.

An examination of the annotations of the species list reveals that the birds of the County inhabit a variety of habitat types and that many seem to be typical of certain elevations and life zones or groups of zones. They may be resolved into four major avifaunal groups, each with its geographic affinity and ecological peculiarities. These are the eastern, the western, the boreal, and the southwestern or Great Basin desert groups. As one would expect, the bulk of the El Paso County birds belongs to the western fauna.

The birds with eastern affinities are typical mainly of the Upper Sonoran Zone and seem to fall into two general categories, the first being those which find the semi-arid conditions and comparatively sparse deciduous growth too unlike their more lush native habitats to occur in large numbers or to stay for any length of time. These are the strays and accidentals, and included in this group are the Reddish Egret, the Kites, Broad-winged Hawk, Gallinule, Woodcock, Red-bellied Woodpecker, Scissor-tailed Flycatcher, Wood Thrush, a number of eastern

warblers, Scarlet Tanager, Rose-breasted Grosbeak, and the Indigo Bunting. Their presence may be attributed to the proximity of El Paso County to their normal routes of migration and to adjacent areas where they occur more commonly. It may be expected that in the future this list will be expanded as more eastern strays visit the County.

The second category of birds with eastern affinities includes those which find the ecological conditions in the County not too great a dislocation from those obtaining farther to the east and occur in greater numbers and remain to breed. They are confined mainly to the Upper Sonoran Zone and include the eastern Flickers, Catbird, Brown Thrasher, the eastern Robins, Eastern Bluebird, Red-eyed Vireo, Bronzed Grackle, and Eastern Goldfinch. As pointed out in the previous section, some of these species owe their present occurrence to an artificial reproduction of eastern conditions. Besides the Vireo, the Brown Thrasher and the Bronzed Grackle have become more common owing to this fact. It is interesting to speculate where this trend may lead in the future with the continuing rapid settlement of the West.

Those birds with southwestern or Great Basin desert affinities are typical of the Upper Sonoran Zone and occur mainly in the southwestern corner of the County. It is here that many of them reach the northeasterly limit of their regular occurrence. They are the Scaled Quail, Road-runner, Gray Flycatcher, Pinyon Jay, Woodhouse's Jay, Titmouse, Bush-tit, Gnatcatcher, Gray Vireo, Western Blue Grosbeak, and Brown Towhee. Ecologically, this is an extremely interesting area, for there is a good correlation between the vegetation and the birds. The Candelabra Cactus, *Opuntia arborescens*, with which the Road-runner is so intimately associated, reaches its northeasterly limit here, as does the bird. This is also true of the Pinyon-Juniper complex, with which the other birds in the list are usually identified. The whole group is prevented from spreading farther northward along the foothills both by the thinning out of this type of vegetation and by the formidable barrier of the Arkansas Divide, which carries with it a portion of the Transition Zone far out onto the plains.

As brought out in the section on the climate of the region, increasing elevations in the Rocky Mountains are accompanied by increases in precipitation which permits a southerly extension of the great boreal forests of northern North America, so that they are well represented in the County on the upper slopes of the Pike's Peak Range. The boreal element of the County avifauna finds ecological conditions here in the Canadian and Hudsonian Zones closely resembling those of the spruce-fir forests much farther north. Birds typical of this group are the Dusky Grouse, Three-toed Woodpecker, Canada Jay, Nutcracker, Hermit Thrush, Solitaire, the Kinglets, Pine Grosbeak, Evening Grosbeak and Cassin's Purple Finch. Most of these birds are closely associated with the *Picea-Abies*

vegetation, usually nesting in it. An exception is the Solitaire, which, while associated with this type of vegetation, usually nests on the ground. Wilson's Warbler, the White-crowned Sparrow, and Lincoln's Sparrow are birds also belonging to the boreal group. However, their habitat, rather than in the spruce-fir itself, is in the alpine *Salix* and other deciduous growth found in the clearings of these forests and bordering the timberline.

Breeding on the tundra proper is that Arctic Zone bird of the very far north, the Pipit, along with the Rosy Finch, a close relative of other boreal rosy finches. It may come as a surprise to those familiar with the Colorado Rockies that there are no Ptarmigan present on the Pike's Peak Range. Throughout the history of the region, none has ever been taken or observed. This may be attributed to the extreme isolation of the range, the nearest alpine habitat being more than 50 miles away.

Another bird notable by its absence is the Black Swift. Apparently the waterfalls which provide its normal breeding environment are lacking in this area.

There are many more birds which could be added to the boreal list but they pass through the County only briefly in migration and nest in the far north. These are mainly the waterfowl and the shorebirds.

Mention should be made of a species of bird occurring in the County which inhabits an exceptionally narrow ecological niche — Virginia's Warbler, which nests only in the Scrub Oak-Mountain Mahogany association, the ecotone between the Upper Sonoran and Transition Zones. As a ground-nesting species, it finds numerous cavities roofed-over by dead oak leaves on the hillsides under the oaks. The caterpillars with which it feeds its young almost exclusively are numerous in the oaks.

Except for the birds listed above, some birds of cosmopolitan distribution, and those of uncertain affinities, the remainder of the annotated list is made up of a typically western avifauna. The birds listed for the various groups are those fairly representative for each group. However, in a class of animals as mobile as birds, there are relatively few which are limited to a particular habitat and not many more with hard-and-fast zonal restrictions. One needs only to see a Snowy Owl in Texas (where it has been reported) to realize that with what has wings almost anything is possible.

SUMMARY

El Paso County, Colorado, is one of very few areas in the Rocky Mountain West where thorough, intensive ornithological investigations were carried out at a very early date. In 1914, Charles Aiken and Edward Warren published *The Birds of El Paso County, Colorado*, the results of 43 years of ornithological research in this region. It seemed desirable to re-study the area, to bring the annotated

species list for the County up to date, to compare the avifauna as it existed in the early days with what we know of it today, to attempt to explain some of the changes which have occurred, and to analyze the factors of present distribution.

During the years 1947 through 1951, approximately 290 individual field trips were performed within the County, with the express purpose of observing or collecting birds. A good portion of the summer of 1955 was spent in the County to visit districts not covered previously. Notes on unusual occurrences and relative abundances were taken.

In 1950, a reorganization of the Aiken Bird Collection at Colorado College provided the opportunity to study it in detail and to make notes of the specimens. During the winter of 1955-1956 an additional six days were spent studying the Collection.

With all these data and some unpublished notes from various sources a new annotated species list for the County was compiled. A number of species were added as new to the County, and there were some deletions. A number of species had changed in abundance.

When the new annotated list was compared with the original one, the changes which had occurred seemed to fall into two general categories: those caused by man and those not caused by man. Among the former were increases in birds associated with aquatic or semi-aquatic environments due to increased storage of water in the County, and increases in certain passerine birds due to deciduous planting about habitations. Decreases were noted for those species subject to hunting pressure or disturbance by grazing and agriculture. Those changes not attributed to man or his activities were mainly shifts in range of undetermined cause.

It was found that four avifaunal elements are present in El Paso County. These are the eastern, western, boreal, and southwestern desert groups. Of these, the large majority of the resident birds have western affinities and belong to that group. The great diversity of bird life in the County was attributed to the presence of every life zone known to Colorado within the County.

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