

BIRDS OF THE CENTRAL PANHANDLE OF TEXAS

By JAMES O. STEVENSON

The writer began a survey of the bird life of the Texas Panhandle in 1935 while engaged in studying the development of Palo Duro Canyon State Park, situated about 20 miles southeast of Amarillo. The Panhandle proper contains 26 counties and, although larger in area than the state of West Virginia, it has received surprisingly little attention on the part of naturalists. This is perhaps understandable as the high plains lack pronounced diversity of habitats and topography. Those who have investigated the canyons, carved by streams in the eastern Staked Plains, have been well rewarded, as these "breaks" are oases on the prairie and are inhabited by many birds and mammals.

The only extensive published accounts on birds of the Panhandle which I have found were written by McCauley (Bull. U. S. Geol. and Geog. Surv. Terr., 3, no. 3, 1877) and by Strecker (Baylor Univ. Bull., 13, nos. 4 and 5, 1910). Seventy-eight brief newspaper articles on birds of Palo Duro Canyon and other sections of the Panhandle, written by Kenneth Carlander, appeared in the Amarillo News in 1934. Only fragmentary references to the birds of the Panhandle are contained in the Pacific Railroad Reports and accounts of army explorations.

This paper deals mainly with birds observed and collected in an extremely interesting region of the Panhandle, namely, the plains in the vicinity of Amarillo and the Palo Duro Canyon system which is drained by streams tributary to the South Fork of Red River. The survey was confined almost entirely to Randall, Potter and Armstrong counties. Many notes on water birds and other species, relating to the entire Panhandle, have been supplied by Philip F. Allan of the United States Soil Conservation Service.

The flat or rolling plains, which are used for grazing of livestock or crop production, vary in elevation from 3400 to 3800 feet. This land contains many small streams and also a number of shallow lakes. As many of these are temporary in nature, they are called "wet-weather" lakes. In Randall and Armstrong counties, Palo Duro Creek (also known as Prairie Dog Town Fork) has cut a colorful gorge, 200 to 800 feet in depth. Palo Duro and tributary canyons possess the most extensive timbered areas of this section of the state. These canyons, with their wealth of vegetation and permanent streams and springs, are highly attractive to bird life.

In the past eight years, several hundred lakes and artificial stock tanks have been developed in the Panhandle by the Soil Conservation Service and other federal agencies. These impoundments have had considerable effect on waterfowl, shore birds, and other water birds. The projects are particularly valuable to waterfowl, especially in periods when the natural playa lakes are dry. Stabilized lake and pond areas have provided nesting places for an increasing number and variety of ducks; and, of course, waterfowl populations increase tremendously in migration periods. For example, as many as 100,000 ducks have been observed at one time on Buffalo Lake, near Umbarger, Texas.

Between 1935 and 1938, Paul Russell, T. F. Smith and the writer spent 100 field days in the region. This includes the summer of 1935 (Russell) and nine short field trips in February, May, August, September, October and December. Although the following list of birds is far from complete, particularly as regards migratory passerine species, it is fairly representative for summer and winter resident birds. Additional collecting of critical specimens is needed.

I am indebted to Dr. H. C. Oberholser of the Cleveland Museum of Natural History for the identification of most of the specimens mentioned in this paper, and to Philip F. Allan for notes and information supplied, through correspondence, on various species.

Note: References to "the park" and "the canyon" refer to Palo Duro Canyon State Park and Palo Duro Canyon, respectively.

Gavia immer. Loon. One seen at Boggy Creek Lake, near Canadian, Hemphill County, in October, 1940, by Philip F. Allan.

Podilymbus podiceps podiceps. Pied-billed Grebe. Common migrant. Two were seen at a wet-weather lake in Randall County, 4 miles south of Amarillo, August 10, 1936. Allan observed a pair building a nest at Buffalo Lake, Randall County, near Umbarger, in July, 1939.

Pelecanus erythrorhynchos. White Pelican. According to Allan, this pelican is a regular migrant in the Panhandle, principally in autumn; the species is sometimes seen in spring at Buffalo Lake.

Phalacrocorax auritus. Double-crested Cormorant. Allan generally finds three or four birds each autumn at Buffalo Lake; presumably these are *P. a. auritus*.

Ardea herodias. Great Blue Heron. Common migrant along lakes and streams.

Casmerodius albus egretta. American Egret. Uncommon fall migrant on the larger lakes of the Panhandle.

Nycticorax nycticorax hoactli. Black-crowned Night Heron. One was seen near the town of Canyon on September 25 and three along the Canadian River, Potter County, on September 27, 1938. Allan found them to be abundant at Buffalo Lake in the autumn of 1939 and reports a colony along the Canadian River, near Canadian, Texas. Mr. L. E. Simms of Canyon informed me that about 100 adults nested in a grove 9 miles west of Canyon in 1934.

Plegadis guarauna. White-faced Glossy Ibis. Allan noted seven at Buffalo Lake on October 30, 1939.

Branta canadensis. Canada Goose. A flock of 11 large geese was noted 10 miles east of Canyon on February 8, 1936. Allan has recorded flocks of one thousand or more geese, of at least two subspecies, in spring and fall migration at Buffalo Lake.

Anser albifrons. White-fronted Goose. Seven were seen at Boggy Creek Lake, near Canadian, by Philip Allan, in September, 1939.

Chen hyperborea. Snow Goose. Allan has noted a few each migration period in flocks of Canada Geese, and a flock of 22 at Buffalo Lake in March, 1939. Mr. Gordon Finney and Col. Steve Rydings saw two at a lake, 9 miles east of Canyon, in the last week of December, 1934.

Anas platyrhynchos platyrhynchos. Mallard. Abundant migrant on all lakes. Mallards nested in 1939 at Buffalo Lake.

Chaulelasmus streperus. Gadwall. Abundant migrant. Allan found a brood of young at Buffalo Lake in July, 1939. He considers the Gadwall to be a common breeding bird throughout the Panhandle wherever conditions are suitable.

Mareca americana. Baldpate. Abundant migrant on Panhandle lakes.

Dafila acuta tzitzihoo. Pintail. Very abundant early spring and fall migrant in the Panhandle. The species nested at Buffalo Lake in 1939.

Nettion carolinense. Green-winged Teal. Abundant migrant.

Querquedula discors. Blue-winged Teal. Abundant migrant. Reported by Allan as nesting at Buffalo Lake in 1939.

Querquedula cyanoptera. Cinnamon Teal. Uncommon migrant on the larger lakes of the Panhandle.

Spatula clypeata. Shoveller. Common migrant on most large lakes.

Nyroca americana. Redhead. Common to abundant migrant on the larger lakes.

Nyroca collaris. Ring-necked Duck. Uncommon migrant in spring and fall on the larger lakes of the Panhandle.

Nyroca valisineria. Canvas-back. Common migrant on the larger lakes. Allan saw a flock of about 200 at Buffalo Lake on March 16, 1941.

Nyroca affinis. Lesser Scaup. Common migrant and winter resident at the larger lakes of the Panhandle; occasionally seen on small lakes.

Glaucionetta clangula americana. American Golden-eye. Uncommon winter resident.

Charitonetta albeola. Buffhead. Uncommon on the larger lakes in fall and winter.

Erismatura jamaicensis rubida. Ruddy Duck. Common migrant.

Lophodytes cucullatus. Hooded Merganser. Occasionally noted in autumn by Allan.

Mergus merganser americanus. American Merganser. Common winter resident on the larger lakes and streams of the Panhandle.

Cathartes aura. Turkey Vulture. Common summer resident.

Ictinia mississippiensis. Mississippi Kite. This species is still a regular summer resident in suitable localities in the Panhandle. The bird is generally found in the vicinity of cottonwoods along creeks and rivers. I saw two adults in Palo Duro Park on August 10, 1936. Philip Allan (*in litt.* July 8, 1941) states that this kite is "very abundant along Canadian River and tributaries, also Wolf Creek and tributaries. Seen in Potter, Lipscomb, Hemphill, Roberts, Wheeler, Donley and Armstrong counties."

Accipiter velox. Sharp-shinned Hawk. A common summer resident in Palo Duro Canyon; adults and immature birds were observed frequently in 1935 and 1936.

Accipiter cooperii. Cooper Hawk. One was seen by T. F. Smith at the Harold Ranch, Armstrong County, on December 27, 1936.

Buteo borealis. Red-tailed Hawk. A resident of the canyons and adjacent plains; abundant in winter.

Buteo swainsoni. Swainson Hawk. Common summer resident. A migrant flock of 75 was seen 5 miles east of Wildorado on October 3, 1937. Hundreds were observed perched on knolls in farm fields near Amarillo in late September, 1938. The birds, apparently attracted by a horde of grasshoppers, became easy prey to farmers' rifles.

Buteo lagopus s. johannis. American Rough-legged Hawk. A common winter visitor, forming a conspicuous target when perched on telephone or fence posts along highways. Many dead birds of this and the following species, evidently shot by motorists, were found on the Canyon-Amarillo highway in the winter of 1935-1936.

Buteo regalis. Ferruginous Rough-leg. Fairly common winter visitor on the plains; a few nest in the canyons.

Parabuteo unicinctus harrisi. Harris Hawk. One was studied at close range for an hour on September 30, 1937, while it perched in cottonwoods along the creek at the north boundary of the park. I am familiar with this species through association with it in central Texas and am certain of the identification. The presence of this straggler was vigorously protested by several Golden-fronted Woodpeckers and flickers.

Aquila chrysaetos canadensis. Golden Eagle. This eagle, a regular resident of Palo Duro Canyon, was observed almost daily when we were in the field.

Haliaeetus leucocephalus. Bald Eagle. Mr. W. G. Anderson informed me that he saw four adults on the banks of Palo Duro Creek in the park in February or March, 1936. Mr. L. E. Simms, a taxidermist in Canyon, has noted the species regularly in the canyon, particularly in early winter. His collection contains a mounted adult and an immature bird. There is also a mounted adult in the Panhandle-Plains Historical Museum at Canyon. These specimens were collected by Simms in Palo Duro Canyon in winter, between 1934 and 1937. Measurements of these birds are as follows:

	Exposed culmen	Height of bill at base	Chord of wing
Adult, Panhandle-Plains Museum	62 mm.	40 mm.	23 inches
Adult, Simms Collection	68 mm.	43 mm.	24.75 inches
Immature, Simms Collection	68 mm.	45 mm.	26 inches

On the basis of these measurements, Dr. Oberholser has referred these birds to the northern race, *H. l. washingtoniensis*.

Circus hudsonius. Marsh Hawk. A very common migrant and winter visitor; it may nest here. Allan noted courtship of a pair at Buffalo Lake on May 30, 1941. This is the commonest hawk on the plains in winter. Russell observed a number near park headquarters in July and August. Fall migration begins in late July.

Pandion haliaetus carolinensis. Osprey. According to Allan, the Osprey is a rare spring and fall migrant in the Panhandle. He has seen a few at Boggy Creek Lake and at Buffalo Lake.

Falco mexicanus. Prairie Falcon. A fairly common resident of Palo Duro Canyon, nesting on cliff ledges. This falcon is more common in winter than in other seasons; it was often noted cruising over the plains or perched on telephone poles.

Falco peregrinus anatum. Duck Hawk. Philip Allan has seen a few in the Panhandle; one was noted at Buffalo Lake, May 1, 1941.

Falco sparverius sparverius. Sparrow Hawk. Common resident of the canyons and plains. One was collected on September 24, 1938, one mile west of Canyon.

Colinus virginianus. Bob-white. This quail is common in scrub oak country of the eastern Panhandle but it is rarely seen in the Palo Duro region. Russell saw several in the canyon in 1935 and a flock of 30 was observed on the Elkins Ranch, Randall County, on September 30, 1937. Local persons informed me that many quail, trapped in Georgia, were released in the canyon a number of years ago.

Callipepla squamata. Scaled Quail. "Blue Quail" are common residents of the canyons and adjacent mesquite areas but are less often seen on open farm lands. A late nest, containing 11 eggs, was discovered in the park on September 9, 1935. This nest was later deserted. Several were noted in mesquite thickets below the cap rock, 12 miles east of Silverton, Briscoe County, on September 29, 1937.

Grus canadensis. Crane. Large flocks of cranes (*G. c. canadensis* ?) were observed in migration in Randall, Potter and Oldham counties, in October, 1937. Allan reported cranes to be abundant migrants each spring and fall at Buffalo Lake; a flock of four or five thousand spent the winter of 1940-1941 at Buffalo Lake.

Porzana carolina. Sora. One was flushed from a tule marsh, one mile east of Canyon on September 25, 1938.

Fulica americana americana. Coot. Very common migrant. Allan found coots nesting at Buffalo Lake in the summer of 1939.

Oxyechus vociferus vociferus. Killdeer. Very common summer resident near streams in the canyons and at lakes and tanks on the plains.

Capella delicata. Wilson Snipe. One was seen on May 3, 1936, and four on September 25, 1938, on mud flats of Tierra Blanca Creek, near Canyon.

Numenius americanus. Long-billed Curlew. A very common migrant on the plains. Allan (*in litt.*, July 8, 1941) states that curlews nest in the northern part of the Panhandle and are regular breeding birds of Dallam County.

Bartramia longicauda. Upland Plover. A regular summer resident of range and cultivated farm lands; observed numerous times in fields within the city limits of Amarillo and at near-by lakes.

Actitis macularia. Spotted Sandpiper. A summer resident along Palo Duro Creek in Randall and Armstrong counties and at certain lakes and tanks in the vicinity of Amarillo.

Tringa solitaria. Solitary Sandpiper. Three were seen at a small lake, 4 miles south of Amarillo, on August 10, 1936.

Totanus melanoleucus. Greater Yellow-legs. Six were noted at the same lake where the Solitary Sandpipers were seen, on October 2, 1937, and two were noted near Claude, Armstrong County, on September 24, 1938.

Totanus flavipes. Lesser Yellow-legs. A common migrant; recorded in May and from July to October.

Pisobia melanotos. Pectoral Sandpiper. One was noted on a mud flat on Tierra Blanca Creek, 1 mile northeast of Canyon, on September 25, 1938.

Pisobia bairdii. Baird Sandpiper. A few were seen at lakes near Amarillo on August 10 and 11, 1936, and on October 2, 1937. One was found at a pond, 10 miles south of Claude, on September 24, 1938.

Pisobia minutilla. Least Sandpiper. Two were seen at Tierra Blanca Creek, near Canyon, on May 3, 1936.

Limnodromus griseus. Dowitcher. A flock of 13 was noted at a pond, 10 miles south of Claude, on September 24, 1938.

Ereunetes mauri. Western Sandpiper. Fairly common migrant at small lakes in spring and fall.

Recurvirostra americana. Avocet. One was observed at Canyon on May 3, 1936, and five at a lake 4 miles south of Amarillo on October 2, 1937. Reported by Carlander and Allan as a breeding bird in the Panhandle.

Phalaropus fulicarius. Red Phalarope. A mounted female collected by L. E. Simms on October 12, 1933, near Canyon has been reported by the writer (*Condor*, 39, 1937:92).

Steganopus tricolor. Wilson Phalarope. Four were noted swimming in a lake 4 miles south of Amarillo on August 9, 1936.

Larus argentatus smithsonianus. Herring Gull. Allan considers this gull to be a fairly common migrant and winter resident in the Panhandle.

Larus delawarensis. Ring-billed Gull. An adult was seen at a lake 4 miles south of Amarillo on October 2, 1937. This species is listed by Allan (*in litt.*, July 8, 1941) as a "common migrant and winter resident."

Sterna antillarum. Least Tern. Reported by Allan as a rare migrant in the Panhandle.

Chlidonias nigra surinamensis. Black Tern. A flock of six was found at a lake 4 miles south of Amarillo on August 10, 1936.

Zenaidura macroura. Mourning Dove. This dove is an abundant summer resident in the Panhandle. It nests in shade trees about farm houses and in hackberry, juniper, mesquite and other trees of the canyons. Young birds were found in nests as late as September 1.

Coccyzus americanus americanus. Yellow-billed Cuckoo. A common summer resident of timbered canyons in which nests and young have been observed. An adult male was collected on August 10, 1936, at the Harold Ranch, Armstrong County, and an adult female on August 11, 1936, at the Elkins Ranch, Randall County.

Geococcyx californianus. Road-runner. Common resident of the canyons and mesquite-covered plains of the region; occasionally noted on open farm lands.

Tyto alba pratincola. Barn Owl. Allan (*in litt.*, July 28, 1941) states that M. S. McMurtrey photographed young Barn Owls in a nest in a canyon at Channing, Hartley County, on July 24, 1936.

Bubo virginianus. Horned Owl. Horned Owls, probably *B. v. pallescens*, are common residents of Palo Duro Canyon and other wooded canyons of the region.

Speotyto cunicularia hypugaea. Burrowing Owl. A common resident of prairie dog towns on the plains. Several were seen on Mesquite Mesa, Randall County.

Asio wilsonianus. Long-eared Owl. One was found by Philip Allan in a canyon near Memphis, Hall County, in the "fall of 1938."

Chordeiles minor. Nighthawk. Nighthawks are common in summer in the region and nest on the plains.

Megaceryle alcyon alcyon. Belted Kingfisher. A common summer resident along streams in Palo Duro Canyon where a few remain in winter. Russell found kingfishers nesting in bluffs along Palo Duro Creek in 1935.

Colaptes auratus. Flicker. Several were seen by Smith in cottonwoods and junipers along Palo Duro Creek, December 27 to 31, 1936. About 15 were observed near the north end of the state park and on the adjoining Elkins Ranch, September 30 to October 1, 1937.

Colaptes cafer collaris. Red-shafted Flicker. Common in winter in Palo Duro and adjacent canyons. Several were observed and one collected on the Elkins Ranch on September 30, 1937. Flickers were very common in the canyon and also along the Canadian River in Potter County, September 24 to 27, 1938.

Centurus aurifrons. Golden-fronted Woodpecker. This noisy and conspicuous woodpecker is a common resident of Palo Duro Canyon in Randall and Armstrong counties, ranging as far north as Palisades State Park, 12 miles south of Amarillo. The species is closely associated with cottonwoods along streams; these trees are invariably used as nesting sites. In August, 1936, immature, almost full-grown birds, were observed in Palo Duro Canyon State Park. Specimens were collected on the Harold and Elkins ranches in December, 1935, February and December, 1936, and September, 1938.

It is rather strange that McCauley, who explored Palo Duro Creek and most of the other streams in the eastern Panhandle in 1876, does not mention this species in his paper; nor does Strecker list it as present in Armstrong County in 1910. It has been reported recently as the most common woodpecker in Palo Duro Canyon (Carlander, Amarillo News, September 1, 1934). A locally-taken, mounted specimen is in the Panhandle-Plains Historical Society Museum at Canyon.

Philip Allan (*in litt.*, July 28, 1941) informs me that this woodpecker also is found near Canadian, Texas, in the northeastern corner of the Panhandle. It is a fairly common resident among cottonwoods along the Canadian River.

These isolated colonies may be the result of rather recent invasions from the southeast or the species may have been overlooked until recent years. Although the generally accepted range in the state is central and southern Texas, there are published records for north Texas. The writer, in July, 1935, saw Golden-fronted Woodpeckers in Archer and Baylor counties, about 180 miles southeast of the Palo Duro and Canadian areas mentioned above. Whether the species occupies the intervening territory or not is unknown.

Sphyrapicus varius. Yellow-bellied Sapsucker. One was observed in the park on December 20, 1935, and another in Deep Canyon, Elkins Ranch, on December 25, 1936.

Dryobates scalaris symplectus. Texas Woodpecker. A common resident of the oak and mesquite forests in the canyon and the wooded plains. Several specimens were collected in Palo Duro Canyon in December, 1935. One was collected in a mesquite thicket 10 miles northwest of Amarillo on September 27, 1938.

Tyrannus tyrannus. Eastern Kingbird. Allan reports this species as a common summer resident in the northeastern Panhandle.

Tyrannus verticalis. Western Kingbird. Common summer resident of the plains, nesting in orchards and windbreaks around farm buildings. The species occasionally nests in cottonwoods and other trees of the canyon floor.

Muscivora forficata. Scissor-tailed Flycatcher. A common summer resident of the canyons and plains. Flycatchers were often found near ranch houses, nesting in shade trees or on the framework of windmills.

Myiarchus cinerascens cinerascens. Ash-throated Flycatcher. Summer resident in Palo Duro Canyon, Randall and Armstrong counties.

Sayornis phoebe. Eastern Phoebe. One was collected at Dripping Spring, 15 miles southwest of Claude, on September 24, 1938.

Sayornis saya saya. Say Phoebe. One was noted near the park entrance on October 2, 1937. Four were seen (1 collected) in cottonwoods 6 miles northwest of Amarillo on September 26, 1938. Strecker (*op. cit.*: 29) reports the species as common, and nesting, in the canyons and arroyos in Armstrong County.

Myiochanes virens. Eastern Wood Pewee. An adult female, probably a migrant, was collected in Palo Duro Canyon on the Elkins Ranch on August 11, 1936.

Nuttallornis borealis. Olive-sided Flycatcher. One was observed on August 10, 1936, on the canyon floor at the Harold Ranch.

Otocoris alpestris. Horned Lark. Abundant resident of the plains. An immature bird was collected on September 30, 1937, and four taken on December 28, 1936, in Randall County, have been identified as *O. a. enhymia*. According to Dr. Oberholser, this is the breeding horned lark of the Panhandle. A specimen of *O. a. leucolaema* was taken by Smith in Randall County on December 28, 1936. An example of *O. a. lamphrochroma*, collected near Canyon, February 9, 1936, was reported by the writer in the Condor (39, 1937:44).

Riparia riparia riparia. Bank Swallow. Two were noted at a wet-weather lake 4 miles south of Amarillo, on August 10, 1936.

Petrochelidon albifrons. Cliff Swallow. Hundreds of cliff swallows nest each summer in various canyons of the Palo Duro system. Their nests are cemented to the steep faces of cliffs near the heads of Timber, Sunday, Cito and other canyons.

Cyanocitta cristata cyanotephra. Blue Jay. Two migrants were noted at Canyon on September 30, and three were seen and one collected in Palo Duro Canyon on October 1, 1937. Three were found in Palisades State Park on September 26, 1938. *Cyanotephra* was described by Sutton (Auk, 52, 1935: 176-177) from a specimen collected at Kenton in the Oklahoma Panhandle. Sutton considers this to be the breeding race of the blue jay in the western Great Plains region.

Aphelocoma californica woodhouseii. Woodhouse Jay. Four were observed on a juniper-covered hillside near Dripping Spring, 15 miles southwest of Claude, on September 24, 1938. One of these was collected. Several were noted in mesquite thickets north of Amarillo and along the Canadian River, Potter County, on September 27, 1938.

Cyanocephalus cyanocephalus. Piñon Jay. L. E. Simms of Canyon has two mounted birds in his collection; he shot these in January or February, 1929, from a large flock found in junipers in Palo Duro Canyon on the Harold Ranch.

Baeolophus atricristatus paloduro. Black-crested Titmouse. The Panhandle race of the Black-crested Titmouse was described by the writer (Proc. Biol. Soc. Wash., 53, 1940: 15-16) from specimens taken in Palo Duro Canyon. This titmouse is a common resident of Palo Duro and wooded tributary canyons in Randall and Armstrong counties. Occupied nests were noted in cavities in cottonwoods in the state park in 1936. A number of adult and immature birds was collected in the months of February, May, August, September, and December.

Saltriparus minimus plumbeus. Lead-colored Bush-tit. Smith noted a flock of 15 in a juniper thicket in Palo Duro Canyon on the Elkins Ranch on December 26, 1936. A male was collected. Philip F. Allan and D. Douglas saw a flock in Palo Duro Canyon, Randall County, on July 4, 1938.

Thryomanes bewickii cryptus. Texas Bewick Wren. Common resident of canyon thickets in Randall and Armstrong counties. Russell located a nest with young in a soapberry tree in the park on July 16, 1935. A few specimens were collected in May, August and December, 1936.

Catherpes mexicanus. Canyon Wren. A common resident of the canyons of the central Panhandle. Birds were frequently heard singing in summer from canyon walls in the park.

Salpinctes obsoletus obsoletus. Rock Wren. Common resident of the gypsum bluffs in Palo Duro Canyon. A family group, which included four young, was seen on the canyon road at the north end of the park on August 9, 1936.

Mimus polyglottos. Mockingbird. A common summer resident in towns and near farm buildings on the plains, also nesting in canyons. A few winter in sheltered canyons. One was noted on December 20, 1935, and another on December 30, 1936, in junipers in the state park.

Toxostoma rufum. Brown Thrasher. Two were found in a tamarisk thicket along the Canadian River, 20 miles northwest of Amarillo, on September 27, 1938. Allan classifies this species as a not uncommon summer resident at Canadian, Texas.

Oreoscoptes montanus. Sage Thrasher. One was collected in Palo Duro Canyon, Randall County, on February 8, 1936. This bird apparently was wintering far north of the usual winter range of the species.

Turdus migratorius. Robin. Migrant and common winter visitor to the juniper thickets of the park and vicinity.

Hylocichla guttata guttata. Alaska Hermit Thrush. Smith collected a male on December 26, 1936, near Palo Duro Creek, 1 mile north of park headquarters on the Elkins Ranch.

Sialia currucoides. Mountain Bluebird. Common winter resident in juniper forests in the canyons. Flocks of several hundred birds were noted in the months of December and February in the park. Two were seen at the park entrance on October 2, 1937.

Myadestes townsendi. Townsend Solitaire. Common on the canyon floor in winter. In December of 1935 and 1936 small groups were noted in the park and on adjoining ranches. One was collected in cottonwoods 20 miles northwest of Amarillo on September 27, 1938.

Polioptila caerulea. Gnatcatcher. Rather common summer resident of juniper and mesquite thickets of Palo Duro and Cito canyons. Russell found a nest containing young in the park on

July 11, 1935. Adults were observed feeding young out of the nest on the Harold Ranch on August 10, 1936.

Regulus satrapa satrapa. Eastern Golden-crowned Kinglet. Smith noted a few on the Elkins and Harold ranches, December 25 to 27, 1936. One specimen was collected.

Corthylio calendula calendula. Ruby-crowned Kinglet. Smith noted single birds on the Elkins and Harold ranches between December 25 and 31, 1936. Two were seen at McSpadden Lake on October 1, 1937. Four were observed and one collected along the Canadian River, 20 miles northwest of Amarillo on September 27, 1938.

Bombycilla garrula pallidiceps. Bohemian Waxwing. Smith noted a flock of 12 flying over Palo Duro Creek, on the Elkins Ranch, Randall County, on December 26, 1936. A male, which he collected, is the first record of the species for Texas.

Bombycilla cedrorum. Cedar Waxwing. Observed in February and December, 1935, and in February, 1936. Flocks of from 10 to 75 birds were noted feeding on juniper berries in Palo Duro and Palisades parks.

Lanius ludovicianus. Loggerhead Shrike. Common summer resident on the plains, a few remaining through the winter. They were observed nesting in trees near ranch houses and in mesquite on Mesquite Mesa in the park. One collected 4 miles east of Canyon on September 26, 1938, has been identified as *L. l. nevadensis*.

Vermivora celata celata. Orange-crowned Warbler. One was collected from a mesquite near Palo Duro Creek, Harold Ranch, on May 3, 1936. Many were observed along the Canadian River, 20 miles northwest of Amarillo, on September 27, 1938. Two specimens were collected.

Vermivora ruficapilla ruficapilla. Nashville Warbler. Three were noted in cottonwoods along Palo Duro Creek in the park on October 2, 1937. Many were observed and two collected in woods along the Canadian River, Potter County, on September 27, 1938.

Dendroica aestiva. Yellow Warbler. Yellow Warblers are summer residents along wooded streams of the canyons and plains.

Dendroica auduboni. Audubon Warbler. Several were noted in Palo Duro Canyon, September 29 to October 1, 1937. Smith observed a warbler which he identified as this species on the Elkins Ranch on December 31, 1936. Four were seen and one collected 2 miles west of Canyon on September 24, 1938. The specimen has been identified as *D. a. memorabilis*.

Geothlypis trichas. Yellow-throat. Two males were observed in a marsh near Canyon on September 25, 1938.

Wilsonia pusilla pileolata. Northern Pileolated Warbler. Several migrants were noted along a creek near Canyon on October 1, 1937. Twenty were seen and one collected in cottonwoods of the Canadian River Valley, 20 miles northwest of Amarillo, on September 27, 1938.

Passer domesticus. English Sparrow. Common permanent resident of towns and farm yards.

Sturnella neglecta. Western Meadowlark. Common resident of the plains; two specimens taken.

Xanthocephalus xanthocephalus. Yellow-headed Blackbird. Rather common migrant along river courses; observed in May and September.

Agelaius phoeniceus. Red-winged Blackbird. Large flocks were noted along streams near Canyon, September 24 to 26, 1938.

Icterus bullockii. Bullock Oriole. Uncommon summer resident, nesting in cottonwoods along streams.

Euphagus cyanocephalus. Brewer Blackbird. Several were found near Silvertown, Briscoe County, on September 29 and a flock was seen at Canyon on September 30, 1937.

Quiscalus quiscula aeneus. Bronzed Grackle. Three were noted at a ranch house 10 miles south of Claude on September 24, 1938.

Molothrus ater. Cowbird. Common summer resident. Large flocks, mostly of immature birds, were noted in early August along roadsides in Randall County. An adult and two immature birds were collected on August 9 and 10, 1936. These were identified as *M. a. ater*, "not typical."

Piranga ludoviciana. Western Tanager. A migrant, an adult male, was observed on the canyon flats near the east park boundary on August 10, 1936.

Richmondia cardinalis planicola. Cardinal. This subspecies was described by the writer (Proc. Biol. Soc. Wash., 53, 1940: 16-17) from a specimen taken in Palo Duro Canyon, Elkins Ranch, Randall County. Twenty adult and immature specimens were collected in wooded sections of Palo Duro Canyon in Randall and Armstrong counties.

Cardinals are common residents of this region, occurring in thickets of juniper and hardwoods in the canyons. This form ranges from the central Panhandle east to western Oklahoma.

Hedymeles melanocephalus. Black-headed Grosbeak. Two were noted on the Harold Ranch in Palo Duro Canyon on September 25, 1938.

Guiraca caerulea interfusa. Western Blue Grosbeak. Common summer resident of the canyons, nesting in scrub oak and hackberry groves. Adults were observed feeding young in a nest in the park

on June 29, 1935. An adult male was collected on May 3, 1936, on the Harold Ranch. One was noted in a thicket near the Canadian River, 20 miles northwest of Amarillo, on September 27, 1938.

Passerina ciris. Painted Bunting. Uncommon summer resident of the wooded canyon floor of Palo Duro Park.

Carpodacus mexicanus. House Finch. Resident in Palo Duro Canyon and vicinity. Finches are present throughout the year but are more common in winter. A family group was observed on August 9, 1936, at the north end of the park.

Spinus pinus pinus. Northern Pine Siskin. Two were noted with a flock of cedar waxwings in Palisades State Park on February 8, 1936.

Spinus psaltria psaltria. Arkansas Goldfinch. Resident in small numbers in Palo Duro Canyon; observed in February, May, August, September and December. Two immatures were collected on September 29, 1937, on the Elkins Ranch.

Pipilo maculatus. Spotted Towhee. Uncommon migrant in the canyons. Several were observed on September 30 and October 1, 1937, in grape thickets on the Elkins Ranch. One specimen collected has been identified as *P. m. arcticus*. A male collected by Smith on the Elkins Ranch, December 31, 1936, has been identified as *P. m. montanus*.

Calamospiza melanocorys. Lark Bunting. An abundant migrant on the plains. A few remain in the region in summer but no nests were discovered. The species is an early migrant in autumn; hundreds of adults and immature birds were seen in early August. A flock of 20 was still present near Canyon on October 1, 1937. An adult was collected on May 3, 1936, on Mesquite Mesa, Randall County. Philip Allan (*in litt.*, July 28, 1941) states that "nests of the lark bunting were found two years ago [1939] north of Amarillo, near the Canadian River, and this year [1941] young birds have been seen at the same locality."

Passerculus sandwichensis. Savannah Sparrow. Abundant migrant on the plains, some remaining through the winter. One collected 6 miles southeast of Canyon on September 30, 1937, is referable to *P. s. nevadensis*.

Passerherbulus caudacutus. Leconte Sparrow. One was collected on May 3, 1936, in a mesquite thicket along Palo Duro Creek on the Harold Ranch, Armstrong County. This locality is west of the usual migration route through Texas.

Poocetes gramineus. Vesper Sparrow. A very common migrant on the plains. Two specimens, collected in Randall County on May 3, 1936, and October 2, 1937, represent *P. g. confinis*. A specimen taken on September 30, 1937, 6 miles southeast of Canyon, has been identified as *P. g. definitus*, the breeding bird of the Great Basin.

Chondestes grammacus. Lark Sparrow. Lark sparrows are common summer residents on the plains and in open mesquite areas of the canyon floor.

Aimophila ruficeps eremoeca. Rock Sparrow. Fairly common summer resident of the canyons, inhabiting wooded slopes and ledges. An immature was collected on August 11, 1936. Recorded once in winter: Smith collected an adult on December 25, 1936, in Cooley Draw, Elkins Ranch.

Aimophila cassinii. Cassin Sparrow. Common summer resident on the plains, nesting along fence rows among grasses and "tumbleweeds." Two immatures were collected on August 9, 1936, a few miles south of Amarillo.

Spizella pallida. Clay-colored Sparrow. Common migrant on the plains. One was collected on October 2, 1937, 4 miles south of Amarillo, and another, 6 miles north, on September 26, 1938.

Junco hyemalis hyemalis. Slate-colored Junco. Common winter visitor to sheltered canyons, associating with the following species. Three specimens were collected on December 25 and 26, 1936, on the Elkins Ranch.

Junco oreganus. Oregon Junco. Common winter visitor in the canyons. Specimens of *J. o. shufeldti* and *montanus* were taken on December 25 and 26, 1936, respectively, on the Elkins Ranch.

Spizella passerina arizonae. Western Chipping Sparrow. Common migrant of the plains and canyons. One was collected 1 mile west of Canyon on September 24, 1938.

Melospiza lincolni lincolni. Lincoln Sparrow. Six were observed and one collected in thickets along the Canadian River, 20 miles northwest of Amarillo, on September 27, 1938.

Melospiza melodia. Song Sparrow. Uncommon winter visitor to Palo Duro Canyon, where it has been observed in December and February. A specimen of *M. m. juddi*, the Dakota Song Sparrow, was collected on the Elkins Ranch on December 31, 1936. Four were noted on September 27, 1938, in tamarisk thickets along the Canadian River, Potter County.

Rhynchophanes mccownii. McCown Longspur. Common winter visitor on the plains in flocks with the following species. Five specimens collected 8 miles east of Canyon, December 28, 1936.

Calcarius lapponicus. Lapland Longspur. This species is a rather common winter visitor on the plains. A specimen of the Alaska Longspur, *C. l. alascensis*, collected February 9, 1936, 10 miles east of Canyon, has been recorded as the first specimen for the State (Stevenson, Condor, 39, 1937: 44).

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