

Title

Birds of the NTS This report lists the collection records and status of bird species found on NTS

Author

Hayward, C. L, Killpack, Richards,



101035

Document Date

6/1/63

ERC Index number

05.09.079

Document Type

Report

Box Number

1673-1

Recipients

EG&G/EM

437
Duplicate

ADMIN RECORD #	59.079
<i>WJ</i>	<i>05.09.079</i>

Brigham Young University
Science Bulletin

LIBRARY OF EG&E/EM
Environmental Sciences Department

BIRDS OF THE NEVADA TEST SITE

by

C. LYNN HAYWARD, MERLIN L. KILLPACK AND
GERALD L. RICHARDS

NOTICE: This material may be pro-
tected by copyright law (Title 17 U.S.
Code)



BIOLOGICAL SERIES — VOLUME III, NUMBER 1

JUNE, 1963

124

BEST AVAILABLE COPY

2288

TABLE OF CONTENTS

	Page
Introduction	1
Geographic location of the Nevada test site	2
Accounts of the species	4
Selected references	26
Plant communities of the Nevada test site	28

BIRDS OF THE NEVADA TEST SITE

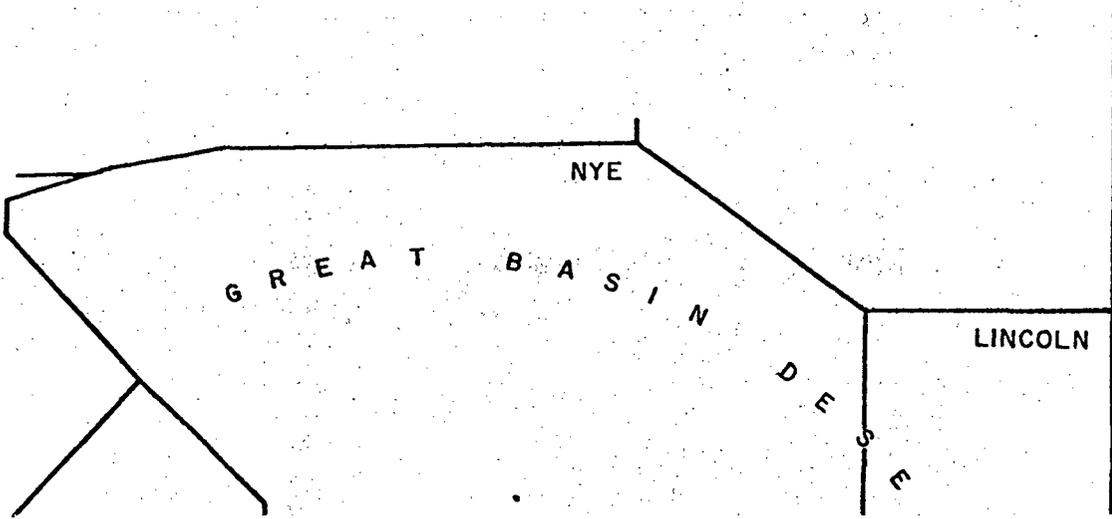
During the course of ecological studies conducted at the Atomic Energy Commission test site since 1959 in the vicinity of Mercury, Nevada, collections and observations of the birds of the area were made. Although the work on birds was somewhat incidental to other phases of the study, a considerable amount of information nevertheless was assembled, and it would seem to be desirable to publish it at this time. Most of the collecting and observing was done during 1961 and 1962, at which time about 900 specimens were collected and prepared as study skins and several thousand individual observations were recorded.

The overall project at Mercury was carried on under a contract (AT(11-1)786) between the Atomic Energy Commission and Brigham Young University. Dr. Donald M. Allred of the Department of Zoology at Brigham Young University was the principal investigator and served as general supervisor of the project. Clive D. Jorgensen, who was at the time the immediate director of the work at the site, made some of the collections and observations of the birds. The work of the authors was as follows: Hayward did some collecting and observing at the site during the summer of 1960 and has been responsible for cataloguing and identifying the specimens and for writing most of this manuscript. Killpack and Richards, both of whom worked at intervals on the site, were responsible for most of the field collecting and recording, particularly during the 1961 and 1962 seasons. Killpack has also done most of the work on the bibliography. Prior to the time of this project, W. H. Rickard made some observations on the nesting of birds at the test site. His data were available to us through his publication (1961). Richards (1962) has published a short paper on the wintering of certain birds in the area. Our own information has been recorded on IBM cards and reproduced so as to indicate numbers, seasonal occurrence, and habitat relations for each species. This information has been used

Allred, Beck and Jorgensen (1963) have described in considerable detail the principal biotic communities of the Nevada Test Site. They have also included a list of the known species of birds and indicated their habitat preferences. For this reason it will not be necessary here to comment extensively on the biotic communities and their ecological significance. It may be desirable, however, to point out certain features of the physical and biotic habitats that influence the distribution and occurrence of the avifauna of the area.

Considering the generally desert condition of the area, it is rather remarkable that so many different kinds of water and shore birds have been recorded. Nearly all of these birds are transients and their occurrence is dependent upon the availability of open water, which is variable from season to season and from year to year. The playa basins of Frenchman and Yucca Flats sometimes contain considerable water. In fact, the basin at Frenchman Flat was partially dammed off and during the winter of 1960-61 and the following summer contained a lake several feet deep. Run-off from local cloudbursts frequently collects in these basins, and the water may remain for several weeks or months. Nearly all of the common species of local and transient water birds stop on these lakes. Most of the kinds of shore and wading birds that ordinarily migrate across the area also stop for varying lengths of time at the playa lakes. At wells 3B and 5B there are small reservoirs which contain water most of the time and also attract a few water and shore birds. Over the entire test site there are a few small natural springs including Topopah Spring, Tippipah Spring, White Rock Spring and Cane Springs.

Although these springs and reservoirs are limited both in size and in number, they represent scattered oases in an otherwise waterless area, and often attract large concentrations of small land birds that come in especially in the



Springs, where there is some cover as well as water. These water sources, small as they are, are responsible for the presence of many species of birds that would not otherwise find the habitat suitable to their survival.

The atomic testing activities and the building of roadways within the test site have resulted in localized changes in the natural desert vegetation that undoubtedly have influenced the numbers and distribution of certain kinds of birds. When the natural desert vegetation is destroyed, either by an atomic explosion or by road building or other construction work, it is typically replaced within a short time by Russian thistle (*Salsola kali*). This weed serves as a source of food and cover for many small birds, notably the house finch, which feeds on it in great flocks, especially during the winter. It seems likely that this species is far more abundant in the area, owing to these community modifications, than it otherwise would be. Utility

tailed Towhee (*Chlorura chlorura*), and Brewer's Sparrow (*Spizella breweri*), typical resident birds of the Northern Desert Shrub, also occur. During the breeding season the Southern Desert Shrub element seems to be predominant in these lower valleys.

In winter the open and warmer valleys afford a suitable feeding ground for thousands of small passerine birds, many of which move in from higher altitudes or more northern latitudes. Typical of these wintering birds are the Sage Sparrow (*Amphispiza belli*), House Finch (*Carpodacus mexicanus*), several kinds of juncos (*Junco caniceps*, *Junco oreganus*, *Junco hyemalis*), Mountain Bluebird (*Sialia currucoides*), Starling (*Sturnus vulgaris*), White-crowned Sparrow (*Zonotrichia leucophrys*), and Horned Lark (*Eremophila alpestris*). Some of these, such as the House Finch and Horned Lark, are continuously resident in the area but occur in greater numbers during the winter season.

Springs, where there is some cover as well as water. These water sources, small as they are, are responsible for the presence of many species of birds that would not otherwise find the habitat suitable to their survival.

The atomic testing activities and the building of roadways within the test site have resulted in localized changes in the natural desert vegetation that undoubtedly have influenced the numbers and distribution of certain kinds of birds. When the natural desert vegetation is destroyed, either by an atomic explosion or by road building or other construction work, it is typically replaced within a short time by Russian thistle (*Salsola kali*). This weed serves as a source of food and cover for many small birds, notably the house finch, which feeds on it in great flocks, especially during the winter. It seems likely that this species is far more abundant in the area, owing to these community modifications, than it otherwise would be. Utility poles along the roadways serve as convenient perches for several kinds of hawks, falcons and the raven, as well as some other species.

From the point of view of the avifauna, the natural, undisturbed communities fall into two general types. The higher plateau areas exemplified by Rainier Mesa and Pahute Mesa are characterized by a predominance of Pinyon-Juniper woodland in which such species as the pinyon Jay (*Gymnorhinus cyanocephalus*), Mountain Chickadee (*Parus gambeli*), Plain Titmouse (*Parus inornatus*), Solitary Vireo (*Vireo solitarius*), and Black-throated Gray Warbler (*Dendroica nigrescens*) are characteristic residents. The lower type, occupying wide valleys typified by Frenchman, Yucca and Jackass Flats, is vegetated predominantly by a variety of low growing shrubs in which can be recognized several distinct types of plant communities. The Nevada Test Site occupies an area which lies in a position of transition between what has been called the Southern Desert Shrub Biome and Northern Desert Shrub Biome (Fautin, 1946) or the Lower Sonoran and Upper Sonoran

tailed Towhee (*Chlorura chlorura*), and Brewer's Sparrow (*Spizella breweri*), typical resident birds of the Northern Desert Shrub, also occur. During the breeding season the Southern Desert Shrub element seems to be predominant in these lower valleys.

In winter the open and warmer valleys afford a suitable feeding ground for thousands of small passerine birds, many of which move in from higher altitudes or more northern latitudes. Typical of these wintering birds are the Sage Sparrow (*Amphispiza belli*), House Finch (*Carpodacus mexicanus*), several kinds of juncos (*Junco caniceps*, *Junco oreganus*, *Junco hyemalis*), Mountain Bluebird (*Sialia currucoides*), Starling (*Sturnus vulgaris*), White-crowned Sparrow (*Zonotrichia leucophrys*), and Horned Lark (*Eremophila alpestris*). Some of these, such as the House Finch and Horned Lark, are continuously resident in the area but occur in greater numbers during the winter season.

In this paper the kinds of birds known from the Nevada Test Site will be treated individually under two or three principal headings depending upon the kind and amount of information available to us and the status of each species. Collection records are indicated in each case where specimens are available, and general comments will be made on sight records. Although many thousands of sight records are available to us, we have not attempted to make use of these to indicate populations except in a very general way, since the data were assembled rather haphazardly and do not appear to be statistically reliable. Data assembled relative to seasonal occurrence appear to present a rather accurate picture of aspection in the birds, and this information will be summarized for each species. From the information at hand it is possible to draw some conclusions as to the general habitat relations of the several species, but there is a need for more uniform observation and data recording on this particular subject. Whenever more than one subspecies is present in the area, or is likely to occur there, a brief analysis of the

4
A selected bibliography of the papers known to us that deal with the birds of the test site and southern Nevada is included. No attempt is

there. We are also grateful for the constant support of Dr. Donald M. Allred, the general supervisor and principal investigator of the en-



have records for every month except February, March and September. The greatest numbers were seen in May. They were only about 10% as common on the test site as the Green-winged Teal.

Anas cyanoptera Vieillot
Cinnamon Teal

Collection records: Six specimens, March 31, April 1, 7, 16, 1961; April 13, 1962.

Status: The Cinnamon Teal seems to be primarily a spring migrant through the test site area. Most of the records are from March 31 into June with the greatest concentration in April. There is a possibility that a pair may have nested at Cane Springs during the summer of 1959. However, the frequent visits of people at the spring undoubtedly would discourage the regular breeding of the ducks at that place.

Mareca americana (Gmelin)
American Widgeon

Collection records: Three specimens, March 28, October 9, November 5, 1961.

Status: These ducks are regular but rather uncommon spring and autumn migrants. They

Status: The Lesser Scaup is an uncommon spring migrant seen on playa lakes and on reservoirs. We have nine records, all between April 10 and April 22.

Bucephala clangula (Linnaeus)
Common Goldeneye

Collection records: None.

Status: We have only one sight record for December 17, 1961.

Bucephala albeola (Linnaeus)
Bufflehead

Collection records: Three specimens, March 29 and November 11, 1961.

Status: The Bufflehead is a fairly common spring and fall migrant, where it is to be seen on playa lakes and reservoirs at the wells. We have 32 records for March and April and for September through November.

Melanitta perspicillata (Linnaeus)
Surf Scoter

Collection records: Two specimens, Octob-

22 22 1961

Status: The Turkey Vulture is a common spring and summer resident at the test site. Our records extend from April 13 to September 12. It was most commonly seen in the Yucca Flat area.

Accipiter striatus velox (Wilson)
Sharp-shinned Hawk

Collection records: None.

Status: We have four sight records of this hawk for April, September and December. Most of them were seen at Cane Springs. At this place one was observed to capture a Western Tanager.

Accipiter cooperii (Bonaparte)
Cooper's Hawk

Collection records: Two specimens, July 28,

Status: The Rough-legged Hawk was recorded in the test site area from November 2 to May 6. It was regarded as the most common hawk in late winter and early spring, perching on utility poles, especially at Yucca Flat. On several occasions pellets were found to contain remains of Jerusalem crickets.

Buteo regalis (Gray)
Ferruginous Hawk

Collection records: One specimen, November 11, 1959.

Status: This species is regarded as a rather uncommon and irregular visitor at the test site. Nine scattered sight records are available from September 5 to June 14. The birds were most frequently seen perched on utility poles in Yuc-

in the cliffs around the mesas. On June 26, 1961, a nest was examined that contained two young with pin feathers. Mourning Dove feathers were found in the nest. The young were out of the nest and flying by July 19.

Falco sparverius sparverius Linnaeus
Sparrow Hawk

Collection records: Six specimens, November 6, 1959; April 3, 13, February 12, October 24, 1961.

Status: Sparrow Hawks were common in the test site area every month of the year but were most abundant in April. There was con-

Status: This species is known at the test site only as a spring migrant from March 30 to May 13. Birds were seen on playas at Yucca Flat and around the edges of well reservoirs. Several published records for the Truckee and Reno area are available (Christensen and Trelease, 1941; Johnson, 1954). Alcorn (1946) and Marshall (1951) reported specimens from Lahontan Valley. The only records known to us for southern Nevada are those for Lake Mead reported by Grater (1939).

Charadrius alexandrinus nivosus (Cassin)
Snowy Plover

Pluvialis dominica dominica Müller
American Golden Plover

Collection records: Two specimens, September 14, 1961.

Status: The occurrence of the Golden Plover at the Nevada Test Site is known only from the two specimens collected. The birds were taken at Frenchman Flat Playa. We have not been able to find any other published record of this species for the state of Nevada.

On the basis of the lesser amount of yellow spotting on the back and the shorter beaks our specimens definitely belong to the subspecies *dominica*.

Squatarola squatarola (Linnaeus)
Black-bellied Plover

Collection records: None.

Status: We have only one sight record for May 6, 1961.

Capella gallinago delicata (Ord)
Common Snipe

Collection records: Four specimens, October 11, 1960; March 25 and October 9, 1961; March 28, 1962.

Status: The Common Snipe is a rather uncommon spring and autumn transient. It has been recorded in the area from March 17 to April 8 and again from September 18 to October 25. Observations have been made at Cane Springs, at playa lakes and around the well reservoirs.

Actitis macularia (Linnaeus)
Spotted Sandpiper

Collection records: Six specimens, May 2, 23, 15 and September 4, 1961; May 11, 1962.

Status: Spotted Sandpipers migrate in fairly large numbers through the test site in spring and autumn, especially in April and May. There are also often records of occurrence in summer when they may be seen on playas or around well reservoirs.

Tringa solitaria cinnamomea (Brewster)
Solitary Sandpiper

Collection records: Two specimens, April 23, 28, 1961.

Status: This species is an uncommon spring and autumn transient at the test site. Six records are available for April 23 to 28 and again August 11 to 27. The birds were seen around playa lakes.

According to the A.O.U. Check-list (1957) it is possible that either the races *solitaria* or *cinnamomea* could occur as transients in Nevada. Comparing our specimens with series of both races in the U.S. National Museum makes it clear that they are *cinnamomea*. Late summer adults of *cinnamomea* can be easily distinguished on the basis of the buffy rather than white spotting on the back. The narrower dark tail bands of *cinnamomea* in comparison with the wider ones of *solitaria* are also distinctive. The wing measurements of our specimens also fall more nearly within the range of *cinnamomea*.

Totanus melanoleucus (Gmelin)
Greater Yellowlegs

Collection records: Three specimens, March 18 and April 14, 1961.

Status: Fairly common spring and autumn transients around playa lakes and well reservoirs. We have 39 records from March 18 to May and again from August to October 9. This species is much more common in the area than the Lesser Yellowlegs.

Totanus flavipes (Gmelin)
Lesser Yellowlegs

Collection records: Two specimens, August 21 and October 10, 1961.

Status: The Lesser Yellowlegs is an uncommon transient in spring and fall. We have five records scattered from March 9 to May 7 and again from August 21 to October 10. All were seen at the playa lakes.

Erolia melanotos (Vieillot)
Pectoral Sandpiper

Collection record: One specimen, October 3, 1961.

Status: A rare migrant in the test site area. Only the one specimen collected was seen. To our knowledge this is the first record of the Pectoral Sandpiper for Nevada.

Erolia bairdii (Coues)
Baird's Sandpiper

Collection records: Three specimens, April 9, August 12, September 30, 1961.

Status: This species is an uncommon spring and autumn transient. We have a total of 9 records for April 9 and again for August 4 to October 6. The birds were seen mostly at the playa lakes but occasionally at the well reservoirs.

Erolia minutilla (Vieillot)
Least Sandpiper

Collection records: Twelve specimens, March 18, 29, April 7, 16, 22, 23, October 26, 1961.

Status: This is a common spring and autumn transient species in the test site area. We have records of its occurrence from February 11 to October 3 except for June and September. The largest concentrations are in April and May at which time small flocks occur at the playa lakes.

Erolia alpina pacifica (Coues)
Dunlin

Collection records: Two specimens, May 13 and October 10, 1961.

Status: The Dunlin or Red-backed Sandpiper is a rare spring and autumn migrant at the test site where it was seen and collected at the playa lakes. In addition to the collection records, we have a sight record of three individuals for April 1. Linsdale (1951) cites only 4 records

erous records from April 15 into May and again from July to October 8. It was found exclusively around the playa lakes.

One of our specimens collected on April 22, 1961, has an exceptionally short bill, placing it well within the range of *E. pusillus*. However, on the basis of the distinctly brown back and heavier and more extensive streaking of the underparts, we have placed it with *E. mauri*.

Limosa fedoa (Linnaeus)
Marbled Godwit

Collection record: One specimen, July 20, 1961.

Status: The Marbled Godwit was a rare visitor at the test site during the period of this study. Only the one specimen collected was observed. Linsdale's (1951) summary of the Nevada records indicates that this species is not common in the state although it is a consistent visitor.

Lobipes lobatus (Linnaeus)
Northern Phalarope

Collection records: Three specimens, May 14, July 5 and September 3, 1961.

Status: Northern Phalaropes are rather uncommon spring and autumn migrants seen at

Nests were most commonly found in *Yucca* trees or on the ground in the *Coleogyne* community. Nests were found as follows: June 29 with week-old young; June 23 with young; June 15 with eggs.

Coccyx californianus (Lesson)

no observations for April through August, indicating that it may be a winter visitor only. However, more careful investigation may show

are most abundant in June and July. We have no information on the daytime habits of this species in the area.

Colaptes cafer collaris Vigors
Red-shafted Flicker

Collection records: Four specimens, October 24, 1960; October 7, 20, 1961; April 13, 1962.

Status: The Red-shafted Flicker was recorded for every month of the year except January.

in typical *monticola*. It is possible that this individual is intermediate between the two races and has drifted farther south in the winter.

Dendrocopos scalaris cactophilus (Oberholser)

Sayornis nigricans semiatra (Vigors)
Black Phoebe

Collection records: Four specimens, July 28, 1960; May 28, August 9, 1961.

Status: Black Phoebes are uncommon summer residents around the wells and at Cane Springs. Our records extend from March 31 into May and again in July and August.

Sayornis saya saya (Bonaparte)
Say's Phoebe

Collection records: Eleven specimens, July 27, 1960; May 10, 24, February 7, April 14, June 2, 15, 1961; March 13, 1962.

Status: This phoebe is a very common resident in all types of communities at the test site. We have records for every month of the year except October and December. It is likely that some individuals remain in the area as permanent residents although we have found them to be more common in March through June. A nest containing 4 fresh eggs was found at Mid Valley, May 27, 1961, on a ledge about 5 feet up. An old nest was also found at Cane Springs and another in a cave at Tippipah Spring on July 27, 1962.

Empidonax hammondii (Xantus)
Hammond's Flycatcher

Collection records: Three specimens, April 30, May 21, 1961; May 13, 1962.

Status: Owing to the difficulty in making sight identifications of the *Empidonax* flycatchers the status of this species in the area is somewhat in doubt. However, it is believed to be a fairly common summer resident in the Pinyon-Juniper and Oakbrush communities.

Empidonax oberholseri Phillips

is a summer resident in the Pinyon-Juniper and Oakbrush communities of the mesas and small canyons. Since *E. oberholseri* and *E. wrightii* are difficult to separate in the field, we have not attempted to record sight data.

Contopus sordidulus veliei Coues
Western Wood Pewee

Collection records: Twelve specimens, July 27, 1960; May 11, 20, 23, 24, 26, June 2, 4, 16, 1961; May 5, 1962.

Status: The Wood Pewee is a common migrant in May and is resident in summer in oakbrush of the small canyons and in the Pinyon-Juniper of the mesas. Records are available from May 5 to September 7. During the peak of migration in May these birds are occasionally seen in the *Yucca-Coleogyne* community of the lower deserts.

Nuttallornis borealis (Swainson)
Olive-sided Flycatcher

Collection records: Four specimens, May 24, 26, June 2, September 18, 1961.

Status: The Olive-sided Flycatcher is a rather uncommon migrant at the test site in spring and autumn. The earliest record is for May 24 and the latest September 18. There are no records for July but 12 recordings were made for late August. Birds were seen in the Pinyon-Juniper of the mesas and in oakbrush of the small canyons.

Pyrocephalus rubinus flammeus van Rossem
Vermilion Flycatcher

Collection record: One specimen, July 22, 1962.

Status: Only the one record of the specimen collected is available. The collection was

around well reservoirs in the evening when they came in to drink. Young birds were frequently caught in mammal traps in the *Atriplex confertifolia* community, which seems to be their preferred nesting habitat.

The subspecific status of the horned lark population at the Nevada Test Site is of considerable interest. From the information at hand it seems rather clear that neither the wintering nor breeding birds are of the race *utahensis*, which is supposedly the breeding subspecies of the eastern Great Basin. Both young and adult test site specimens are on the whole decidedly lighter, less grayish and brighter on the upper parts than Great Basin specimens. Only one of our specimens approaches characteristic *utahensis*. Most of our wintering specimens appear to be identical with the race *leucolaema* from eastern Utah. Our breeding specimens are rather paler than the latter race and are temporarily assigned to the race *ammophila*, the breeding range of which includes southwestern Nevada (A.O.U. Check-list, 1957, p. 357).

Tachycineta thalassina lepida Mearns
Violet-green Swallow

Collection records: Five specimens, April 2, June 30, 1961; May 12, 1962.

Status: This species is fairly common at the test site in spring and summer. We have recorded it from March 11 to August 8, when it is most often seen feeding over water at playa lakes and reservoirs. The birds were also occasionally seen in the Pinyon-Juniper in July, and there is a possibility that they nest there.

Iridoprocne bicolor (Vieillot)
Tree Swallow

Collection records: Two specimens, April 2, 23, 1961.

Status: The Tree Swallow is an uncommon spring transient through the test site, where it was seen feeding over and near open water. We have 18 records from March 28 to April 25.

Riparia riparia riparia (Linnaeus)
Bank Swallow

Collection records: One specimen, May 13, 1961.

Status: The Bank Swallow is an uncommon spring transient and summer visitor. We have 15 records made on May 12 and 13 and on July 30. It was observed feeding over and near open water.

Stelgidopteryx ruficollis serripennis (Audubon)
Rough-winged Swallow

Collection record: One specimen, April 12, 1961.

Status: We have 14 records of this species, all in spring, from March 8 to May 11. They were seen feeding near and over open water.

Hirundo rustica erythrogaster Boddaert
Barn Swallow

Collection records: None.

Status: The Barn Swallow is an uncommon spring and autumn transient at the test site. We have a total of 17 sight records from April 22 to June 6 and again from September 10 to October 7. The birds were seen around open water.

Petrochelidon pyrrhonota (Vieillot)
Cliff Swallow

Collection records: None.

Status: Twelve sight records are available from April 23 to May 24 and again on August 9. We have no records for June and July. Lacking specimens we have not been able to determine the subspecific status although on the basis of known distribution it could be either *P. p. pyrrhonota* or *P. p. hypopolia*.

Cyanocitta stelleri (Gmelin)
Steller's Jay

Collection records: None.

Status: Steller's Jay appears to be an uncommon resident of the Pinyon-Juniper and Oakbrush communities. We have 8 sight records for August 22 and 23 and October 25. Owing to the lack of specimens we have been unable to determine the subspecific status of the resident population.

Aphelocoma coerulescens nevadae Pitelka
Scrub Jay

Collection records: Four specimens, August 1, 1960; March 16, May 14, July 2, 1961.

Status: The Scrub Jay is a rather common resident in the Pinyon-Juniper and oakbrush communities. We have recorded it from February 22 to October 10, with the greatest number of records being in May. We have no records as yet for the months of November, December and January.

Pica pica hudsonia (Sabine)
Black-billed Magpie

Collection records: None.

Status: We have only one sight record of the magpie for December 5, 1961.

Corvus corax sinuatus Wagler
Common Raven

Collection records: Five specimens, November 13, December 15, 1959; August 31, October 14, 1960; April 21, 1961.

Status: Ravens are consistent residents of the test site and have been recorded for every month of the year. They are most often seen in pairs along the roadways, but they have also been noted on the mesas and around springs. On June 1, 1961, two nesting sites were located on cliffs bordering the mesa; however, it was not possible to reach the nests for close observation.

Corvus brachyrhynchos hesperis Ridgway
Common Crow

Collection records: None.

Status: The Common Crow is an uncommon winter visitor to the test site. Four records are available from November 5 to December 6. The birds were seen on the mesa and also near the town of Mercury.

Gymnorhinus cyanocephala Wied.
Piñon Jay

Collection records: Four specimens, July 31, August 1, 1960; July 7, 1961.

Status: This jay is a fairly common resident of the Pinyon-Juniper on the mesas and in canyons bordering the mesas. Our records extend from April 9 to December 11, although it is likely that the birds also occur during the mid-winter months. Most of our records are for April through August.

Nucifraga columbiana (Wilson)
Clark's Nutcracker

Collection records: Two specimens, September 28, 1961.

Status: This species has been observed uncommonly in the Pinyon-Juniper community. We have only two records from September

Parus gambeli inyoensis (Grinnell)
Mountain Chickadee

Collection records: Seven specimens, July 3, 1960; March 31, April 15, June 16, July 2, 1961.

Status: Mountain Chickadees appear to be permanent residents in the Pinyon-Juniper community. We have records of them for every month of the year except January, but they were most commonly seen in April through July.

Parus inornatus ridgwayi Richmond
Plain Titmouse

Collection records: Two specimens, March 5 and June 29, 1961.

Status: We have rather few records of this species in comparison with the Mountain Chickadee. We have recorded it from March 5 to June 29 in the Pinyon-Juniper community of the mesas.

Psaltriparus minimus plumbeus (Baird)
Common Bushtit

Collection records: Five specimens, April 16, May 24, June 16, October 8, 1961.

Status: This bushtit is a common resident at the test site throughout most of the year. We have records for every month except September, November, January, and February. It is found both in Pinyon-Juniper and in the *Grayia-Lycium* community. Young of this species were frequently observed.

Sitta carolinensis tenuissima Grinnell
White-breasted Nuthatch

Collection records: One specimen, May 13, 1961.

Status: The White-breasted Nuthatch seems to be rare in the Pinyon-Juniper community. In addition to the specimen collected, we have one other sight record for May 14.

Troglodytes aedon parkmanii Audubon
House Wren

Collection records: None.

Status: The status of the House Wren for the Nevada Test Site is known only from two sight records, April 29 and August 20, 1961.

Thryomanes bewickii eremophilus Oberholser
Bewick's Wren

Collection records: Four specimens, July 3, 1960; March 31, April 15, June 16, July 2, 1961.

Status: This wren is fairly common in Pinyon-Juniper on the mesas from April 15 to August 20. It is likely that some individuals remain all winter since we have records for December.

Camphlorhynchus brunneicapillum couesi
Sharpe
Cactus Wren

Collection records: Five specimens, January 5, 1962 and July 23, 25, 1962.

Status: The Cactus Wren seems to be confined exclusively to communities where the yucca is present. In addition to the five specimens collected we have eight sight records for January 3, 1962. The specimens collected in July were young birds of the year. Apparently the species is confined to the *Yucca* and *Yucca-Coleogyne* communities.

Cistothorus palustris aestuarinus Swarth
Long-billed Marsh Wren

Collection records: Two specimens, March 31 and September 29, 1961.

Status: The Marsh Wren is an uncommon spring and autumn transient at the test site. It was seen around the well reservoirs.

The two specimens collected were placed in the subspecies *aestuarinus* rather than *plesius* in the basis of their shorter beaks. One of the specimens has the typical dark crown of *aestuarinus*, but neither of them is as richly chestnut on the back as *aestuarinus*.

Salpinctes obsoletus obsoletus (Say)
Rock Wren

Collection records: Seven specimens, April 16, May 5, June 16, July 24, August 24, 1961.

Status: Rock Wrens are permanent residents in rocky situations in the Pinyon-Juniper and around the mesas. We have recorded them for every month of the year except February and September. However, they are more commonly seen in March through June.

Mimus polyglottos leucopterus (Vigors)
Mockingbird

Collection records: Two specimens, April 15, June 15, 1961.

Status: The Mockingbird has been recorded in the area from April 2 to August 15, with the greatest number of recordings in May and June. It is seen most often in the *Yucca* habitat but

is also found in the small canyons around the borders of the mesas.

Dumetella carolinensis (Linnaeus)
Catbird

Collection records: One specimen, June 6, 1961.

Status: This species seems to be rare at the test site and has been reported only a few times for the state of Nevada. Linsdale (1951) cites only two records. The one specimen obtained by us was taken at Cane Springs and was probably a transient bird.

Toxostoma lecontei lecontei Lawrence
Le Conte's Thrasher

Collection records: Eleven specimens, December 18, 1959; February 12, August 17, December 3, 1960; May 2, 3, 4, June 1, 29, July 10, 1961; February 12, 1962.

Status: We have records of this thrasher for every month of the year. Most of the records are for June. In winter they seem to move about in small flocks in a nomadic fashion. They appear to be equally at home in all of the types of desert communities but were never seen on the higher mesas.

Oreoscoptes montanus (Townsend)
Sage Thrasher

Collection records: Nine specimens, March 5, 22, April 12, May 20, 21, September 14, 1961; January 16, 1962.

Status: A few sage thrashers apparently winter in the test site area, but they are more commonly seen in early spring (March and April). There is some evidence of nesting. The preferred habitat seems to be *Grayia-Lycium* and *Larrea*, but they also occur in sage and in Pinyon-Juniper.

Turdus migratorius propinquus Ridgway
Robin

Collection records: Four specimens, October 19, 1960; May 24, 26, 1961; January 1, February 27, 1962.

Status: Robins were recorded in the area from January 1 to July 2 and again from October to November 14. Although a few birds winter at the test site, they are more common as spring and autumn migrants. Most of the records were for Cane Springs and the mesa.

Hylocichla guttata oromela Oberholser
Hermit Thrush

Collection records: Five specimens, April 29, October 12, 1961; April 28, May 5, 1962.

Status: The Hermit Thrush is known only as a spring and autumn transient through the test site area. The earliest record is for April 28 and the latest October 20.

All our specimens were identified by Dr. John W. Aldrich as belonging to the race *oromela*. This race was not recognized in the A.O.U. checklist (1957) and was not included by Linsdale (1951) in his list of Nevada birds.

Hylocichla ustulata ustulata (Nuttall)
Swainson's Thrush

Collection records: Two specimens, June 6, 1961; May 12, 1962.

Status: Swainson's Thrush is at present known only as a spring transient. Specimens were collected at Cane Springs and Tippipah Spring.

On the basis of the distinct olive brown rather than the olive or more grayish upper parts our two specimens are definitely of the race *ustulata* rather than *swainsoni*. Compared with *swainsoni* our specimens also have brighter and more buffy throats and upper breasts and their under tail coverts are decidedly buffy rather than whitish. In his list of Nevada birds Linsdale (1951) lists only the races *swainsoni* and *almae* from the state. The latter subspecies is now considered to be a synonym of *swainsoni* (A.O.U. Check-list, 1957). Our record of *ustulata* may therefore be considered as an additional subspecies for Nevada.

Sialia mexicana bairdi Ridgway
Western Bluebird

Collection record: One specimen, May 21, 1961.

Status: This species is an uncommon bird found thus far only in the Pinyon-Juniper of the mesas. We have only 16 records from March 31 to May 21 and again in November.

Sialia currucoides (Bechstein)
Mountain Bluebird

Collection records: Six specimens, March 16, April 26, 27, May 23, 1961; June 14, 1962.

Status: We have many records of the Mountain Bluebird from November to July 2. They

winter they were seen in the lower deserts along the roadways, but in spring they were more common in the Pinyon-Juniper of the mesas. We have no positive record of their nesting and no observation records for August through October.

Myadestes townsendi townsendi (Audubon)
Townsend's Solitaire

Collection records: Four specimens, October 5, 1959; April 23, 24, September 28, 1961.

Status: Solitaires are considered to be spring and autumn migrants through the test site area. We have records from April 23 to June and from September to October 25. Birds have been noted only in the Pinyon-Juniper of the mesas.

Poliptila caerulea amoenissima Grinnell
Blue-gray Gnatcatcher

Collection records. Six specimens, April 25, 30, June 16, July 2, 1961; April 1, 1962.

Status: This gnatcatcher is a common spring and summer resident. Our records extend from April 14 to September 8, although the birds are most abundant in April and May. Their usual habitat is the Pinyon-Juniper of the mesas or the oakbrush of the bordering slopes and canyons. A few were also noted at Cane Springs.

Regulus calendula cineaceus Grinnell
Ruby-crowned Kinglet

Collection records: Four specimens, April 9, 24, 30, October 28, 1961.

Status: Our records of the Ruby-crowned Kinglet extend from October 5 to May 7 with most of the records in April. The bird is considered to be an uncommon winter resident and a common spring and autumn migrant. Most of the records are for Cane Springs.

Anthus spinoletta (Linnaeus)
Water Pipit

Collection records: Ten specimens, April 7, 16, March 30, May 13, September 29, October 8, November 1, 1961; January 26, 1962.

Status: Pipits are common spring and autumn migrants in the area and a few remain throughout the winter. The periods of most common occurrence are from March into May and from September through November. They are seen near the playa lakes and around the well reservoirs.

The subspecific composition of the test site

able to us seems to consist of both *A. s. alticola* and *A. s. pacificus*. Seven out of the 10 seem to be *alticola* and the remaining 3 are placed in *pacificus*. However, it seems difficult to separate these two in the nonbreeding plumage. The three specimens assigned to *pacificus* were taken in late fall and winter; all of those save one that are placed in *alticola* were collected in the spring. The underparts of *alticola* are somewhat brighter buff and the streaks on the breast and flanks are less extensive and individually

birds were observed in all of the types of plant communities. Nesting activity was observed as follows: A nest containing 6 eggs was found in an *Antriplex confertifolia* about 3 feet up from the ground, April 28, 1962; another, also containing 6 eggs was located at Tippipah Spring in a *Purshia tridentata* about 4 feet up, April 28, 1962; another nest containing young about a week old was found on May 5, 1962. These young were banded on May 12.

The subspecific status of the breeding non-

Virco solitarius (Wilson)
Solitary Vireo

Collection records: Five specimens, May 13,
26, 1961; April 28, May 12, 1962.

Status: This vireo is a spring and summer

Dendroica petechia morcomi Coale
Yellow Warbler

Collection records: Seven specimens, April
29, 30, May 14, 10, 20, 21, 1961.

Status: The yellow warbler is a fairly com-

mesas, where it no doubt breeds. Our collection and sight records extend from April 28 to September 6, with most of the observation being made in May and June.

Dendroica townsendi (Townsend)
Townsend's Warbler

Collection records: One specimen, May 13, 1963.

Status: Townsend's Warbler is an uncommon spring transient through the test site. It was seen at Cane Springs and in sagebrush at the edge of the Pinyon-Juniper. We have six sight records from April 28 to May 13 and in October.

Oporornis tolmiei (Townsend)
MacGillivray's Warbler

Collection records: Six specimens, May 13,

Spring. It is not known to breed at either of these places.

Linsdale (1951) states that *scirpicola* is the resident subspecies of southern Nevada. Our male specimens with respect to smaller size, smaller bills, and greater diffusion of the yellow over the abdomen seem close to *scirpicola* rather than the more northern race, *occidentalis*. However, our females show considerable variation in color from both of the above subspecies in that they have brighter yellow throats, grayish rather than brownish flanks, and paler backs.

Wilsonia pusilla (Wilson)
Wilson's Warbler

Collection records: Ten specimens, April 26, 30, May 11, 23, 27, June 2, 1961.

Status: Wilson's Warblers are rather common spring and autumn migrants. They were record-

Xanthocephalus xanthocephalus (Bonaparte)
Yellow-headed Blackbird

Collection records: Four specimens, April 16, 26, 29, May 31, 1961.

Status: This blackbird is an irregular transient at the test site. Our earliest record is for March 31 and our latest September 19. The birds were most common in April and May but a few were noted in June, July, and August. They were seen around the wells and springs and on the playas.

Agelaius phoeniceus (Linnaeus)
Redwinged Blackbird

Collection records: Nine specimens, July 28, October 13, 1960; May 20, October 8, 1961; March 16, April 1, 1962.

Status: The Redwinged Blackbird is the most common icterid at the test site. We have records for all months of the year except December, January and June. Birds are most abundant in April and again in October; at other times only scattered records were made. During the height of their migration they are common in flocks around the wells and springs and near water on the playas.

According to the A.O.U. Check-list (1957) any of the races *fortis*, *nevadensis*, and *sonoriensis* might occur at one time or another in southern Nevada. Most of the birds at the test site are transients, and we have not as yet been able to determine the breeding subspecies if any in that area. Our small series of females show considerable variation as to coloration and size of the beak. The length of the exposed culmen varies from 15.3 to 18.7 millimeters. Few reach the minimum of this measurement for females of either *fortis*, *nevadensis* or *sonoriensis* and none reaches the maximum of these races given by Bishop (1938, Trans. San Diego Soc. Nat. Hist., 9 (1): 1-4). For the present, therefore, it is thought best to leave the subspecific identity of the test site specimens in doubt.

Icterus parisorum Bonaparte
Scott's Oriole

Collection records: Seven specimens, July 27, 1960; June 19, 27, 28, 1961; April 28, 1962.

Status: Our records extend from April 15 to August 9. Scott's Oriole is consistently present at the test site in spring and summer, when it appears to occupy a variety of habitats. It has been observed in *Yucca*, Pinyon-Juniper, sagebrush, and the mixed vegetation around springs.

Icterus bullockii bullockii (Swainson)
Bullock's Oriole

Collection records: Six specimens, July 28, 1960; May 4, 7, 14, July 26, 1961.

Status: Bullock's Oriole is a fairly common spring and summer resident at the test site. We have records from April 14 to September 9, with most of them being in May. The birds were most commonly seen at Cane Springs, in the Pinyon-Juniper of the mesas, and in oak-brush vegetated canyons.

Euphagus cyanocephalus (Wagler)
Brewer's Blackbird

Collection records: Three specimens, April 16, 26, 1961.

Status: This blackbird is a common bird at the test site in spring and autumn, when it is most often seen around the wells and springs. Large numbers were observed in April and again in September and October. They were sparse during the summer months and seemingly absent in winter.

Molothrus ater obscurus (Gmelin)
Brown-headed Cowbird

Collection records: Eighteen specimens, August 27, 28, 1959; July 28, 1960; April 6, 16, 26, 30, 1961; April 28, 1962.

Status: Our records for the cowbird extend from April 6 to November 27, with the greatest numbers being in April and May. Birds were seen around springs and wells and also in the Pinyon-Juniper.

Our specimens are somewhat intermediate in size between *M. a. artemisiae* and *M. a. obscurus*. However, they have the shorter and more slender bills characteristic of *obscurus* and on that basis are referred to that subspecies.

Piranga ludoviciana (Wilson)
Western Tanager

Collection records: Eleven specimens, July 28, August 1, 1960; May 14, 24, 26, June 1961; May 27, 1962.

Status: Western Tanagers have been recorded for the test site from May 13 to September 8 although they are most common in May and September. They are frequently seen in the Pinyon-Juniper of the mesas, and a few may nest there. They are also present at Cane Springs and other springs of the area.

Pheucticus melanocephalus melanocephalus
(Swainson)
Black-headed Grosbeak

Collection records: Seven specimens, May 20, June 4, 30, July 7, 1951.

Status: Our records of the Black-headed Grosbeak extend from April 11 to October 4. Birds are more common in May and June. They inhabit the oakbush around the mesas as well as the Pinyon-Juniper. They were also frequently seen at Cane Springs.

Guiraca caerulea interfusa Dwight and Griscom
Blue Grosbeak

Collection record: One specimen, May 21, 1961.

Status: The Blue Grosbeak seems to be an uncommon visitor to the test site. We have a total of 20 records all from the vicinity of Cane Springs and all for May.

Passerina amoena (Say)
Lazula Bunting

Collection records: Nine specimens, April 30, May 2, 7, 12, June 19, July 2, September 13, 29, 1961; May 12, June 6, 1962.

Status: This species is a fairly common spring, summer, and early autumn resident. Our records extend from April 30 to September 29, but most of them are for May and June. The birds are most commonly seen around Cane Springs, but they are also found in the Pinyon-Juniper of the mesas where there is some evidence of nesting.

Hesperiphona verpertina brooksi Grinnell
Evening Grosbeak

Collection records: Two specimens, October 24, 25, 1961.

Status: The Evening Grosbeak is a rare autumn and winter visitor at the test site. Birds have been noted around the wells and in the Pinyon-Juniper.

Carpodacus purpureus californicus Baird
Purple Finch

Collection records: Two specimens, October 24, 25, 1961.

Status: This species appears to be a rare autumn and spring transient. It has been noted

only in the Pinyon-Juniper of the mesas. Neither Linsdale (1951) nor Gullion, *et al.* (1959) have included this species in their lists of Nevada birds.

Carpodacus cassinii Baird
Cassin's Finch

Collection records: Twelve specimens, April 15, 27, May 21, 23, 26, 27, June 16, October 25, November 14, 1961.

Status: Cassin's Finch is a fairly common resident in the area in spring, summer, and autumn. Our records extended from March 18 to November 14, with the greatest numbers noted in March through June. The birds are almost invariably seen in Pinyon-Juniper but have been recorded occasionally in *Larrea*.

Carpodacus mexicanus (Muller)
House Finch

Collection records: Thirty-nine specimens, October 1, November 18, 1959; December 9, 1960; January 20, 25, 30, 31, February 15, 17, March 10, 11, 19, 26, April 23, 29, May 10, 11, 19, June 15, November 12, 1961.

Status: The House Finch is an abundant resident at the test site throughout the year. Birds are especially abundant in winter, when large flocks are mostly restricted to disturbed areas where Russian thistle is predominant. In summer these birds scatter into the Pinyon-Juniper and *Yucca* where they nest. We have the following nesting records: On May 26, 1961, a nest containing five young recently hatched was found in the top of a *Yucca* about 7 feet from the ground; on June 1, 1961, a nest containing four eggs was found in a juniper.

Moore (Proc. Biol. Soc. Washington, 52:105, 1939) proposed the name *solitudinis* for the Nevada race of House Finch mainly on the basis of less extensive distribution of red in the male. However, his name was not accepted in the A.O.U. checklist (1957), and the name *frontalis* has usually been applied to the Nevada population (Linsdale, 1951). Our series of males taken mostly in winter and early spring show a great amount of variation in both the extent and shade of red. Some of the brighter specimens are near Nopal Red of Ridgeway but range to Peach Red in one specimen. In another group where the coloring is usually far less extensive the color is near Zinc Orange or Ochraceous-orange. In one specimen the throat, forehead, and rump are Yellow Ocher, and there is a distinct grayish brown band across the upper breast.

Spinus pinus pinus (Wilson)
Pine Siskin

Collection records: Five specimens, October 19, 1960; March 30, April 30, November 1, 1961.

Status: The Pine Siskin is an autumn, winter and spring resident of the area. Our records extend from October 19 to April 30, when the birds were seen in the Pinyon-Juniper of the mesas and around Cane Springs. We have no evidence of summer occurrence.

Spinus tristis pallidus Mearns
American Goldfinch

Collection records: Three specimens, February 15, 17, April 30, 1961.

Status: Three birds have been noted at the test site, mainly in winter and early spring,

Passerculus sandwichensis nevadensis Grinnell
Savannah Sparrow

Collection records: Twelve specimens, March 11, 22, 30, 31, April 7, 27, May 6, 26, September 6, 1961; March 9, 1962.

Status: Our records extend from March 11 into May and again from mid-September to October 28. We have no evidence of the presence of this species in winter or summer. It has been noted on the playas and in desert shrub communities near water.

Poocetes gramineus confinis Baird
Vesper Sparrow

Collection record: One specimen, March 13, 1961.

Status: Our records of the Vesper Sparrow are rather unevenly scattered between March 13 and September 10 except in the month of

Amphispiza belli nevadensis (Ridgway)
Sage Sparrow

Collection records: Twenty-two specimens, October 1, 23, 1959; December 3, 1960; January 9, 23, 29, 30, February 1, 17, April 27, October 1, 1961; January 9, April 24, 1962.

Status: Our records of the sage sparrow extend from mid-September to May. The species is one of the most common wintering birds in the area; during the winter it is found in the several types of desert shrub communities. The greatest concentrations occur in December and January.

Junco hyemalis cismontanus Dwight
Slate-colored Junco

Collection records: Two specimens, October 23, 25, 1961.

Status: The Slate-colored Junco is apparently rare at the test site. Only the two collection records and one or two other sight records are indicated in our data. Judging from the records summarized by Linsdale (1951) there are relatively few indications of its occurrence in Nevada. The specimens collected were taken on the mesa in Pinyon-Juniper.

Junco oregonus (Townsend)
Oregon Junco

Collection records: Seven specimens, March 16, April 23, October 8, 1961; January 26, March 2, 18, 1962.

Status: During the winter large flocks of juncos occur on the test site, principally in the Pinyon-Juniper of the mesas. We have records from October 7 to April 14, but they are most abundant in October and November.

Since various species and subspecies usually flock together, it is difficult to give an accurate indication of the relative abundance of the several kinds. However, our observations indicate that the great majority of them are *J. oregonus*. In our material we have representatives of both *J. o. montanus* and *J. o. mearnsi*, with the former apparently being the more common.

Junco caniceps caniceps (Woodhouse)
Gray-headed Junco

Juniper of the mesas, and there is some indication that they may nest there.

Spizella passerina arizonae Coues
Chipping Sparrow

Collection records: Six specimens, April 24, 25, May 9, 23, June 4, 27, 1961.

Status: Chipping Sparrows are common in spring and summer in the Pinyon-Juniper of the mesas and are often frequently found at Cane Springs. We have records from April 14 to November 6, but most of them are for April and May when migration is at its highest. Immature specimens were collected on the mesa, indicating that the birds nest there.

Spizella breweri breweri Cassin
Brewer's Sparrow

Collection records: Eight specimens, April 14, June 4, 16, 19, 28, 1961; April 14, 1962.

Status: We have numerous records of this species between February 10 and September 9. The birds are most abundant in April, May and June. Their favored habitat seems to be in areas where sagebrush is predominant. Young have been taken, indicating that they should be listed among the breeding birds of the area.

Spizella atrogularis evura Coues
Black-chinned Sparrow

Collection record: One specimen, July 2, 1961.

Status: We have only the one record of this species on the test site. It was taken from a thicket of scrub oak on the mesa. Linsdale (1951) indicates that the Black-chinned Sparrow is not common in Nevada and is known only from the southern part of the state.

Zonotrichia leucophrys (Forster)
White-crowned Sparrow

Collection records: Seventeen specimens, November 5, 1959; October 19, 1960; February 1, 15, 17, 20, March 6, 9, September 21, October 13, 1961; April 28, 1962.

Status: White-crowned sparrows are in residence in large numbers from September through



5.1

1.1

- Grater, R. K. 1939c. New bird records for Clark County, Nevada. *Condor*, 41:220-221.
- Gullion, G. W. 1953. Additional records from southern Nevada. *Condor*, 55:160.
- Gullion, G. W. and G. C. Christensen. 1957. A review of the distribution of gallinaceous game birds in Nevada. *Condor*, 59:128-138.
- Gullion, G. W., et. al. 1959. Notes on the occurrence of birds in southern Nevada. *Condor*, 61:278-297.
- Jaeger, E. C. 1927. Birds of the Charleston Mountains of Nevada. *Occas. Papers Riverside Jr. Coll.*, 2:1-8.
- Johnson, N. F. 1956. Recent bird records in Nevada. *Condor*, 58:449-452.
- Johnson, N. K. 1954. Notes on some Nevada Birds. *Great Basin Naturalist*, 14:15-18.
- Johnson, N. K. 1956. Birds of the Pinon Association of the Kawich Mountains, Nevada. *Great Basin Naturalist*, 16:32-33.
- Linsdale, J. M. 1936. The birds of Nevada. *Pac. Coast Avifauna*, 23:1-145. 1 map.
- Linsdale, J. M. 1951. A list of the birds of Nevada. *Condor*, 53:228-249.
- Marshall, D. B. 1951. New bird records for western Nevada. *Condor*, 53:157-158.
- Merriam, C. H. 1898. Life zones and crop zones in the United States. *U.S. Biol. Survey, Bull.* 10.
- Miller, A. H. 1930. Two new races of the Loggerhead Shrike from western North America. *Condor*, 32:155-156.
- Moore. 1939. Two new races of *Carpodacus mexicanus*. *Proc. Biol. Soc. Wash.*, 52:195.
- Oberholser, H. C. 1921. A revision of the races of *Dendroica auduboni*. *Ohio Jr. of Sci.*, 21:243.
- Phillips. 1947. The races of MacGillivray's warbler. *Auk*, 64(2):297.
- Pulich, W. M. and A. R. Phillips. 1961. Autumn bird notes from the Charleston Mountains, Nevada. *Condor*, 53:205-206.
- Richards, Gerald. 1962. Wintering habits of some birds at the Nevada Atomic Test Site. *Great Basin Naturalist*, 22(1-33:30-31).
- Rickard, W. H. 1961. Notes on birds nests found in a desert shrub community following nuclear detonations. *Condor*, 63:265-266.
- Slipp, J. W. 1942. Notes on the Stilt Sandpiper in Washington and Nevada. *Murrelet*, 22:61-62.
- van Rossem, A. J. 1931. Description of new birds from the mountains of southern Nevada. *Trans. San Diego Soc. Nat. Hist.*, 6:325-332.
- van Rossem, A. J. 1936. Birds of the Charleston Mountains, Nevada. *Pac. Coast Avifuna*, 24:1-65.

RECEIVED
MAY 1953

RECEIVED

MAY 4 1995

57