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WINTERING HABITS OF SOME BIRDS AT THE NEVADA ATOMIC TEST SITE

Gerald Richards¹

In the fall of 1959, Brigham Young University began studies to determine the ecology of native animals in undisturbed and atomically disturbed areas at the Atomic Energy Commission test site in Nye County, Nevada. During the winter of 1960-1961, daily visits were made to feeding grounds and other areas of concentration of wintering species of birds. As a result of the nuclear weapons testing during the last eight years, native vegetation has essentially been destroyed in the vicinity of ground zeros, resulting in areas dominated primarily by *Salsola kali* L. These areas were used as feeding grounds by large flocks of horned larks and house finches. Flocks of these two species in these areas have been numbered as high as 5,000 birds. Flocks occurring in neighboring undisturbed areas were much smaller. Presumably, *Salsola* produced large amounts of seed that attracted large numbers of birds into these areas.

Eremophila alpestris (Linnaeus) . . . Horned Lark

The horned lark was the most common species wintering at the test site. Flocks in nuclear disturbed areas were estimated frequently at 2,500 birds. Smaller flocks of about 300 birds were observed throughout the test site. Horned larks were the only birds frequently observed inhabiting the playas which were void of vegetation.

Horned larks were seen in large flocks during the day, but there was no indication that they remained so while roosting at night. In the early morning in the *Atriplex confertifolia* (Torr & Frem.) and *Kochia americana* Wats. plant community, docile larks that were reluctant to fly were observed singly. Their inactivity probably was due to the cold, as they evidently preferred warmer temperatures before becoming active. It was not until about 10:00 a.m. that sizeable flocks were observed.

Carpodacus mexicanus (Muller) . . . House Finch

House finches wintered at the test site in large concentrations where they were restricted almost entirely to the nuclear disturbed areas. Flocks often were estimated in excess of 2,500 birds. Elsewhere house finches were observed in sizeable flocks only at Yucca Reservoir where flocks of about 300 birds were seen flying between the reservoir and the feeding grounds throughout the day.

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Amphispiza belli (Cassin) . . . Sage Sparrow

Unlike the two species discussed previously, sage sparrows avoided nuclear disturbed areas. They seemed to prefer the desert shrubs and only infrequently visited the fringes of disturbed areas. Flocks were small, usually fewer than ten birds, and were distributed widely over the test site. At Yucca Reservoir, however, thirty sparrows occasionally were seen together.

Sturnus vulgaris (Linnaeus) . . . Starling

During the winter the starling population was small. Usually only three or four birds were seen at irregular intervals. At times, however, there were striking increases in the starling population, which seemed related to the occurrence of precipitation. During December, 1960, and February, 1961, there was no rainfall and, consequently, few starlings. In November, 1960, and January, 1961, there was considerable precipitation, and for a short period after each storm, flocks of thirty to forty birds were observed.

Falco mexicanus Schlegel . . . Prairie Falcon

During early winter, prairie falcons were the most common hawks. Five prairie falcons were recorded at one time in December, 1960. Their dominance in numbers was lost during late winter, when the rough-legged hawk became more abundant. Prairie falcons were observed preying on small rodents, but were more frequently seen pursuing flocks of horned larks. On one occasion one was observed to prey on starlings.

Falco sparverius Linnaeus . . . Sparrow Hawk

Sparrow hawks were common on the test site, but seemed to be most numerous in Yucca Flat. They were usually seen perched on utility poles or atop Joshua trees (*Yucca brevifolia* Engelm). An examination indicated that their pellets consisted largely of remains of tenebrionid beetles. The stomach of one bird contained the remains of three side-blotched lizards, *Uta stansburiana* Baird and Girard. The remaining contents were entirely of tenebrionid beetles.

Buteo lagopus (Pontoppidan) . . . Rough-legged Hawk

The rough-legged hawk was the most common hawk on the test site regularly after January, 1961. It was not uncommon to see two or three of these hawks every morning perched on utility poles in Yucca Flat. Pellet examination showed that they had fed on insects as well as rodents, for the bulk of the material was exoskeletons of Jerusalem crickets (*Stenopelmatus fuscus* Halderman).

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