

SOME PRELIMINARY NOTES ON THE NESTING OF THE PINE SISKIN IN EASTERN SOUTH DAKOTA

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The literature on the status of the Pine Siskin (*Spinus pinus*) as a breeding bird in South Dakota seems to be meager indeed. Until comparatively recently this species apparently was not listed for the state. Audubon on the Missouri in 1843 does not mention it, nor was it taken on Lieut. Warren's expedition into the Dakotas (1856-57). Neither was it seen by Baird on the 1856 survey to the Pacific. Coues (1874) did not find it in South Dakota. McChesney (1879) does not include it in the Fort Sisseton listing. Agersborg (1885), whose list, reprinted in the PROCEEDINGS of this Academy, is the first important published record for the state by a resident, did not observe it in the southeastern area.

The earliest published mention of the Pine Siskin in South Dakota seems to be in Visher's (1908) "Birds of Western South Dakota", published in THE AUK (1909). Visher observed "two large flocks in the pines in the Hills". Early in September, 1910, he saw "a small flock" in Harding County in the extreme northwestern corner of the state. In midsummer, 1911, he noted "a large flock in the pines at Edgemont" in Fall River County in the southwest. And in 1913 he published his Sanborn County list, based on fifteen years of observation in southeast-central South Dakota. He writes that the Pine Siskin is a "tolerably common migrant, and occasionally common in winter", but gives no exact dates.

Since then there have been occasional sight records, notably in the Black Hills region and in Clay, Union, and Yankton counties in the extreme southeastern portion of the state. The eastern border seems to have only one sight record, that of Mallory's (1914) in Lincoln County although Larson's "Birds of Sioux Falls and Vicinity" (1925), based on a ten-year study (1906-16) in Minnehaha County, does not even list a sight record of this species, though Minnehaha County lies just north of Lincoln. Over and Thoms (1946. BIRDS OF SOUTH DAKOTA, revised) report it as "a winter resident".

No mention of nidification is made in any of these reports. Published records of nesting seem to be confined to Youngworth (1936) who noted a pair nesting in Yankton and Larrabee (1937) who reported a nest in Yankton County.

Although I have checked the available items in Stephens' "An Annotated Bibliography of South Dakota Ornithology" (1945), I have found no published records of the hatching and rearing to juvenile state of the young of the Pine Siskin in South Dakota. Letters from Dr. Walter J. Breckenridge of the Minnesota Museum of Natural History, University of Minnesota, and Dr. Olin S. Pettingill, Carleton College, Northfield,

Minnesota, investigators in the state, seem to bear this out. They report sight and collection but no breeding records.

The following observation therefore has to do with the nesting of the Pine Siskin on the eastern edge of South Dakota as far north as Minnehaha County. It is a first occurrence for that county and probably is a first record of juvenile Pine Siskins in the state.

I have been collecting data on this species at Sioux Falls in Minnehaha County since 1948, and have sight records for this 6-year period covering the months of the year excepting June, July, and August. Research in another field took me out of the city and precluded investigation during those months. The areas of investigation were limited to McKennan Park and Woodlawn Cemetery, both of which abound in conifers, mostly blue spruce (*Picea pungens*) and western yellow pine (*Pinus ponderosa*), introduced as ornamental trees. I am a graveyard bird watcher. The dead do not disturb me though the living sometimes do.

Early in April, 1948, I saw and identified flocks of small, dark, streaked goldfinch-sized birds as the Pine Siskin in Woodlawn Cemetery. I observed the birds carefully. The curious wheeling flight and the loud songs, including the characteristically buzzy *shccc*, of certain individuals, uttered on the wing, made me wonder whether this was a courtship display and whether this species nested here. During April and May I saw and noted by actual counts some 25 individuals. The numbers decreased later in April. Few were seen during early May. I am quite certain now that this is the nesting period when females are incubating and when males apparently become less vocal. This may account for the scarcity of records for this period.

During 1949 I noted individuals in January, February, and March, their numbers seeming to increase in early April. Again I saw the intriguing behavior of certain individuals—the wide circling flights, and heard the loud incessant songs. I concluded that these individuals were males, for there are no apparent field differences between the sexes, and that this was a mating display, although I found no nests.

Not until 1951 did I discover the first nest. It was in the graveyard on the extreme tip of a branch of a western yellow pine. It was well hidden, being partially under a cluster of cones and covered by the long needles. Mr. and Mrs. Herman Chapman, members of the South Dakota Ornithologists Union, corroborated my observation. Circumstances however did not permit further investigation to determine whether eggs were or had been laid, or young hatched. For that year, 1951, I have 63 sight records. The smallest number of individuals noted was 1 on January 14, the largest an estimated 40 on October 6.

In April, 1952, I found six nests in Woodlawn Cemetery and two in McKennan Park. All nests were in conifers, five of them in blue spruce and three in yellow pines. Six were about 20 to 25 feet from the ground. Two were only 10 or 12 feet up. Three nests were examined. One held three eggs, the second two and third one. And in one of them

was the egg of the ubiquitous Cowbird (*Molothrus ater*). Nests in pine were at the extreme ends of branches among the cones. Nests in spruce were built farther in, where overhanging sprays of needles would conceal them. Chapman and I photographed these nests and eggs. Regrettably, circumstances again made it impossible to determine whether eggs hatched or young were raised.

Not until May 9, 1953, did I discover the young of the Pine Siskin. I was in the graveyard again, listening to the call of the adult Pine Siskin, which is a loud, fairly sharply-defined "clee-ip," if one were to use human sounds. Along with it, perhaps answering it, I suddenly heard a hoarse, huskily-articulated but diminutive "chay-ip." I saw an adult Pine Siskin fly from a nearby blue spruce. After a little search, I found a young Pine Siskin perched on the lower bare branches of the tree, near the trunk. It continued its plaintive "chay-ip" even after I pushed the branches aside for a closer look. It was more than half grown and was completely feathered except for areas on the side under the wings in the axillars region. The primaries were developed enough so that the individual could fly the distance from branch to branch but not developed enough for extended flight. The yellow patch in the wing was just beginning to show, the color being heaviest along the ribs of the individual feather. The yellow in the tail was faint but unmistakable. The breast was streaked much like the adult, although in this individual, downy tufts still indicated its immaturity. Mr. Willard Rosine, Biology Department, Augustana College, substantiated my observation. We photographed the individual. Finally we left it in the spruce where I had found it.

Later we saw an adult Siskin fly into a neighboring spruce. Hearing more calls, we investigated and found a second young of the species. This one was better able to fly. It escaped into the upper branches before we could examine or photograph it. Although we searched carefully, we were unable to find a nest or nests from which the two might have come.

Unfortunately a heavy rainstorm in the night of May 9 killed what I feel sure was the individual we photographed. I found it next morning under the downswep branches of the same spruce in which I had discovered it. The specimen (No. 1001) is now in the collections of the Department of Biology at Augustana College, Sioux Falls. I found no trace of the second individual.

Further study and observation may reveal how frequently the Pine Siskin nests in South Dakota, and perhaps also something about its adaptation to an environment far removed from what is generally regarded as its breeding grounds in more northern latitudes.