

White-crowned Sparrow (*Zonotrichia leucophrys*) breeding in Arizona.—

Although the "Check-list of North American birds" (A.O.U., 1957) lists the White-crowned Sparrow as breeding in Arizona, the records supporting this statement are questionable. Mearns (Auk, 7: 259, 1890) reported White-crowns "apparently" nesting at the base of the San Francisco Mountains in June 1887, where no suitable habitat exists today. One specimen was collected in the White Mountains of east-central Arizona in July 1936, but none have been reported from there since. Accordingly Phillips et al. (The birds of Arizona, Tucson, Univ. Arizona Press, 1964) do not list the species as breeding in the state.

While conducting a biotic survey of the high coniferous forest and alpine portions of the San Francisco Mountains in north-central Arizona we discovered a population of White-crowned Sparrows breeding in an area known as the Inner Basin, with a relatively flat floor at an elevation of 10,000 feet, surrounded on three sides by peaks rising to about 12,000 feet. In the basin grow Engelmann spruce (*Picea engelmanni*), corkbark fir (*Abies lasiocarpa*), limber pine (*Pinus flexilis*), bristle-cone pine (*Pinus aristata*), and quaking aspen (*Populus tremuloides*). Interspersed among the conifer forest and aspen groves are alpine meadows of various sizes with scattered clumps of *Ribes* and *Salix* that gradually grade into meadows with low stunted trees near timber line. The White-crowns were occupying these meadows from the basin floor to the timber line at about 11,600 feet. This appears to be typical breeding habitat for White-crowned Sparrows elsewhere (DeWolfe, Mountain White-crowned Sparrow. In Bent, U. S. Natl. Mus., Bull. 237: 1338, 1968). Other fringillids nesting in this region included: Gray-headed Junco (*Junco caniceps*), Lincoln's Sparrow (*Melospiza lincolni*), Green-tailed Towhee (*Chlorura chlorura*), and Pine Siskin (*Spinus pinus*).

On the San Francisco Mountains, Gary C. Bateman and the senior author first encountered this species on 18 July 1968 when they saw a pair with fledged young. On 11 June 1969 during our first trip of the year to the Inner Basin, we located one male on territory, and 1 week later 35 pairs were on territories. Their density of about six pairs per 100 acres throughout the ensuing summer showed them to be the most abundant fringillid in the basin. We found the first nest on 27 June, 1½ feet off the ground in a 3-foot Englemann spruce; it contained four downy young. We recorded the first young out of the nest on 10 July. By the first of September most, if not all, White-crowns had left the area.

Allan R. Phillips kindly identified specimens now in the Northern Arizona University Museum as of the race *oriantha*. When Phillips (in litt.) visited the Inner Basin during the summers of 1933, 1939, 1950, and 1954, he found no White-crowns present, and it is inconceivable that he would have overlooked this noisy, conspicuous bird. This and the large size of the breeding population today suggests a recent and successful colonization. In Arizona suitable White-crowned Sparrow habitat is isolated and limited to a very small area on the San Francisco Mountains and possibly on the White Mountains. The nearest breeding populations to this one are about 200 miles to the north in Utah and Colorado, isolated by inhospitable terrain. We suggest that colonization took place by a group of birds moving northward during spring migration; discovery of suitable habitat and perhaps a dry, cold, unproductive spring along their route may have induced them to stay. Heavy snow often lasts in the Inner Basin until May or early June. If the White-crowns arrived just after the snow melted, they found a supply of food and suitable nesting habitat readily available.—RUSSELL P. BALDA, GARY WEISENBERGER, and MICHAEL STRAUSS, *Department of Biological Sciences, Northern Arizona University, Flagstaff, Arizona 86001*.