

herein expressed, represent but a minute fractional percentage of the twenty-nine thousand times birds were handled this year. Certainly the percentage of violent deaths in both our resident and transitory populations from causes not incident to our trapping is to the left of the decimal point. In any event, if our findings are correct, knowledge of the etiology, as in human affairs, affords the exclusively proper basis for efficient prophylaxis. Thus we shall have been able to accomplish one of the fundamental purposes of our undertaking here—bird conservation.

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ON THE STATUS OF JUNCOS IN THE EAST HAVING WHITE WING-BARS

By LEWIS O. SHELLEY

DURING the last thirteen years there has appeared in ornithological literature a number of scattered reports of the occurrence of the White-winged Junco (*aikeni*) in the East, and, as there are several unpublished reports that juncos with white wing-bars have been seen and trapped at banding stations (especially in New England), it seems desirable to publish in a single paper such observations as have been reported in order to furnish a convenient basis for future efforts to determine the status of such abnormally colored birds, that is, whether all or any of the reported occurrences of *aikeni* in the East are valid or are merely those of common Slate-colored Juncos having narrow fringes of white terminating the greater or middle coverts, or both coverts. It is of course well known that such fringes occur occasionally on *hyemalis* and are usually regarded as albinistic in nature and that they also occur more plentifully on *oreganus*.

The literature on the common junco contains numerous references to white on the wings, all agreeing, with the exception of Allen and Brewster, that there is a variation in the whiteness of these wing-markings. Baird, Brewer, and Ridgway¹ write under *aikeni*, "That the white bands on the wings do not constitute a character sufficiently important to be considered of specific value is proved by the fact that in many specimens of *J. oregonus*, and occasionally in *J. hyemalis*, there

¹*History of North American Birds*, Vol. I, p. 584.

is sometimes quite a distinct tendency to these bands in the form of obscure white tips to the coverts." For those who do not have ready access to literature I will quote a portion of the above authors' description of *aikeni*: "Three instead of two outer tail-feathers entirely white . . . upperparts clear ash; the back with a bluish tinge; the lores, quills, and tail-feathers darker; middle and secondary wing-coverts rather broadly tipped with white, forming two conspicuous bands . . . sides tinged with ash. Three lateral tail-feathers entirely white, the third, however, with a narrow streak of dusky on the terminal third of the outer web, the next feather mostly plumbeous, with the basal fourth of the outer web, and the terminal half of the inner, along the shaft, white."

T. M. Brewer² says, quoting Edwin Carter, "that all the adults of this species (*aikeni*), of both sexes, are always found to possess the white wing-bands well defined, and that it is only the birds of the first year, in immature plumage, that furnish what has been mistaken for an intermediate form between this species and the typical *J. hyemalis*." Frank M. Drew³ writes that *aikeni* is "easily recognized by being heavier-built than their allies, as well as by the white wing-bands, though the latter are variable." Two years later, Allen and Brewster⁴ write: "Entire outer webs of first two primaries, and a broad edging of the outer webs of the next three, snowy white to the tips of the feathers. The secondaries and tertials also are broadly tipped with white and the wing bands are exceptionally broad and pure, the general effect of the folded wing being white rather than dark. . . . Among Mr. Aiken's extensive series I found no specimens which showed any intergradation between *J. aikeni* and its allies."

C. W. Beckham⁵ writes that the White-winged Junco is "decidedly one of the shyest birds I ever met with . . . otherwise their habits seemed to be similar to those of other Juncos. The skins collected show a great deal of variation in the intensity of the slate color, and in the amount of white on the wings." In the same journal Rockwell and Wetmore⁶ have this to say: "Some of the immature females in the present series have merely a trace of the white wing bars, but can be readily distinguished from *hyemalis* by their large size."

²*Bulletin Nuttall Ornithological Club*, Vol. III, 1878, p. 75.

³*Bulletin Nuttall Ornithological Club*, Vol. VI, 1881, p. 90.

⁴*Bulletin Nuttall Ornithological Club*, Vol. VIII, 1883, p. 190.

⁵*Auk*, Vol. IV, 1887, p. 122.

⁶*Auk*, Vol. XXXI, 1914, p. 325.

A single *aikeni* was taken in 1883 by W. W. Cooke in Jefferson, Wisconsin. See *The Auk*, Vol. II, 1885, p. 33. Jefferson is in southeastern Wisconsin.

There is only one report of the occurrence of this species in the East, that of a bird banded February 28, 1926, published by Mabel Gillespie in *The Auk*.⁷ The possibility of *aikeni* having occurred in New England is discussed by Forbush⁸ as follows:

"There seems to be no record of the *taking* of this bird in New England. This is a well marked species, readily identified in the field, and there are in letters in the files of the Massachusetts Department of Agriculture several reports of the species which seem credible, but as there is always the possibility of a mistake due to partial albinism, the bird must be relegated to the hypothetical list. We have four 'sight records' of the occurrence of this species in New England. The observers are reliable and had every opportunity to watch the specimens, but it seems best to refuse this species a place in the New England list, until a specimen taken and preserved can be recorded.

"*Vermont*: Waterbury, March 29 and 30, 1919, five or six seen by Dr. G. A. Bidwell. *Massachusetts*: Hatchville, February, 1920, bird observed by Wilfred Wheeler; Falmouth, February 8, 1920, bird seen by Dr. L. C. Jones 'on his door-steps' (possibly the one seen by Mr. Wheeler); Brookfield, October 19, 1924, one seen by Miss Clara Everett Reed."

More recent reports in letters to the writer are those of a bird with white wing-bars taken by Mrs. Gillespie on March 4, 1930, and one banded by Mrs. Effie A. Anthony, at Great Head, Bar Harbor, Maine, on November 11, 1930. To these records the writer adds two birds trapped and banded on April 5 and 8, 1931, at East Westmoreland, New Hampshire. At that time a small flock of juncos possessing white wing-bars was reported to me as having visited a feeding station in East Westmoreland on two separate days during February, 1931, by one of the local school-teachers, Mrs. Alex Thompson. Regarding them she reported that white wing-bars were distinctly visible, especially when the birds were in flight. While the record in itself is of little value, the report is mentioned because of the fact that later in the spring of the same year several juncos with white wing-bars were trapped at my banding station in the same village.

⁷*Auk*, Vol. XLIII, 1926, p. 245.

⁸*Birds of Massachusetts and Other New England States*, Vol. III, 1929, p. 85.

The literature reveals that *aikeni* is far from abundant even east of Cimarron County, Oklahoma, where the species breed sparingly, but Margaret Morse Nice⁹ quotes sight records by T. R. Beard of a flock of 12-20 *aikeni* as far east as Creek County, Oklahoma, between November 10 and January 29, 1920. T. R. Beard¹⁰ also records this species at Sapulpa, Creek County, Oklahoma, in December, 1923.

W. W. Cooke (*The Auk*, Vol. II, 1885, pp. 32 and 33) also reports that in February, 1883, close to his house in Caddo, Bryan County, Indian Territory (Oklahoma), in the southeastern part of the State, he observed one *aikeni*, and shot a second one in worn plumage which was associated with still another in "brighter plumage."

Regarding the recent reports of juncos having white areas in their plumage referred to above, a few of these will be mentioned in more detail.

The bird taken by Mabel Gillespie on March 4, 1930, and presented to the Academy of Natural Sciences, was pronounced an adult male Slate-colored Junco by Wharton Huber, who prepared the specimen. Mrs. Gillespie says that the wing-bars were not so well marked as those of the bird previously banded by her, but, like all of us who have handled white-winged birds, she feels there is more to it than passing it by as an albinistic specimen, and more so since she examined the collection of *aikeni* in the Academy and was struck by the fact of considerable similarity.

The bird banded by Mrs. Effie A. Anthony, at Great Head, Bar Harbor, Maine, did not have pure white wing-bars, these proving to be merely a pale edging to the wings, contrasting with the darker gray, although decidedly conspicuous. It was examined by a bird-student (at Dr. John B. May's suggestion), who measured it very carefully, comparing it with descriptions, and it was decided that it must be an abnormally colored Slate-colored Junco.

At my banding station in the Connecticut River Valley, I banded migrating juncos from two flocks during April, 1931. Thirteen birds from the first flock possessed colorations of which I can find no mention in descriptions by Ridgway, Dwight, and others. Two of these form the basis for the following notes: The buff-yellow color of the under tail-coverts mentioned with these two and present in the rest spoken of above, will not be considered until further data warrant it.

⁹*Birds of Oklahoma*, 1924, p. 85.

¹⁰*Bird-Lore*, Vol. XXVI, 1924, p. 48.

No other unusual birds were taken, however, after the 8th of the month, soon after which the flock disappeared.

Junco No. C95900, an adult male more than one year old, gave these interesting details: upper parts, sides, and flanks uniformly darker than (most) male *hyemalis*; breast and abdomen uniform pure white, with the under tail-coverts suffused strongly with a color between buff and a warm tan, darkest on the feather-tip margins; tail with three outer feathers white; two distinct white wing-bars on left wing and one on right wing 4 to 5 mm. in width, the bars partly obscured in the folded wing but very prominent in the spread wing; bill pink, black-tipped. Slaty color more overlaid with blackish mantle than in (usual) *hyemalis*. The bird, banded and released, was compared with other birds caught, showing at a glance a noticeably darker cast. Mr. C. L. Whittle tells me he has noted that three- and four-year-old Slate-colored Juncos tend to be darker than younger birds.

A second junco No. C95905, considered a first-winter male, or an unusual female, has upper parts, sides, and flanks of dark slaty, with a tinge of brown, especially noticeable on the inner vane of the tertials; also under tail-coverts buff-yellow. In fact, they appear buff-yellow throughout. Two outer tail-feathers clear white; two pure white wing-bars on each wing 4 mm. wide. This bird gave a call-note which I can reproduce only by the letters *z-z-t*, which I had never heard from a junco.¹ Like C95900, C95905 was a slightly large bird for *hyemalis*, as determined by comparing the bird in hand with a specimen *hyemalis* recently killed and in the flesh.

How many other of the fifty-odd birds in the flock from which the white-winged birds were taken and banded had wing-bars is undetermined, since they left as soon as the inclement weather passed. The buffy under coverts, in both male and female birds, the larger size noted in some handled (greatly prominent in the two mentioned above) while the evidence is very conflicting, give strong points for consideration. Too much stress cannot be placed on the unexcelled opportunity banders possess to gather additional data for determining the status of our (Eastern) juncos having white wing-bars. It is hoped by the writer that the banding of juncos, especially in the East, may materialize into a special study in the hope of bringing to light more and conclusive data on this subject.

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¹The Slate-colored Junco sometimes utters a note that might be so rendered.—F. H. A.