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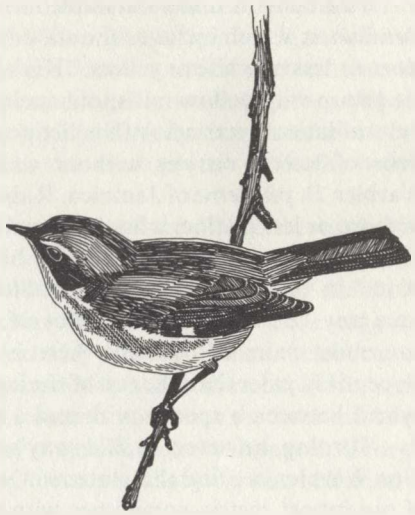
Discovery of an unusual specimen prompts a leading ornithologist to re-examine . . .



Plumage Variation in Female Black-throated Blue Warblers

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For the past several years, Mr. William Bartolo of Youngstown, Ohio, has been salvaging dead birds at the WFMJ-TV tower in Youngstown on behalf of Carnegie Museum of Natural History, Pittsburgh. Among the birds picked up on 13 October 1977 was an obscure warbler that Mr. Bartolo had some difficulty in identifying. At first, I, too, found it puzzling. The body color was basically that of a female Black-throated Blue Warbler *Dendroica caerulescens:* dark greenish above, dirty white washed with dull buffy yellow below, with sides and flanks of a nondescript color partaking of green, gray and buff. The abdomen was whitish, the under tail coverts distinctly washed with yellowish buff. There were *no* distinct markings of any kind on body, wings, or tail. When the bird was made up into a study skin, the preparator, Christopher C. Fichtel, noted that it had a partially pneumatized cranium and a small bursa of Fabricius — in other words, a bird in its first basic plumage, or HY (hatching year) of banding terminology. The ovary appeared immature.

As a student of hybrid warblers, my first reaction was of course that this bird must be a hybrid. If so, then one of the parents had to be a Black-throated Blue Warbler, not only because of the general body color but also because the outer webs of the rectrices were faintly washed with bluish gray. The hybrid theory was invoked to account for the lack of any distinct whitish markings.

I knew that the whitish speculum at the base of the primaries is often obscure or even missing in first-year female Black-throated Blue Warblers, as correctly shown on plate 52 of Peterson (1947) (although both the plate caption and the text are

misleading in their clear implication that this plumage of fall "immatures" is found in *both* sexes). I had, however, wrongly believed that distinct white spots on the rectrices constituted a consistent character of the genus *Dendroica* (except in the Yellow Warbler *D. petechia,* in which the tail-spots are yellow).

This belief is understandable in view of Ridgway's (1902) diagnosis of the genus *Dendroica,* which includes the statement "inner webs of lateral rectrices always with more or less of white or yellow." His key to the species of *Dendroica,* after disposing of the group with yellow tail-spots, includes a couplet in which the first choice is "Inner webs of lateral rectrices with a distinct patch or spot of white;" the alternative, "Inner webs of lateral retrices without white spots," applies *only* to the Arrow-headed Warbler *D. pharetra* of Jamaica. Ridgway explains in a footnote that *D. pharetra* has "a more or less distinct white terminal *margin,* but no approach to the form of a spot." Thus this one species accounts for his deliberately vaguely worded "more or less of white" in the generic diagnosis quoted above. The Youngstown specimen does not have any "distinct patch or spot of white" on the rectrices. On each of the two outermost pairs of rectrices there is a subterminal area, vague in outline, that is perceptibly paler than the rest of the inner web. It looks like what one might expect of a hybrid between a species with and a species without distinct white tail-spots.

Turning, however, to Ridgway's actual description of the female Black-throated Blue Warbler, we find this statement, said to apply to both age classes, "the inner web of outermost rectrix sometimes with an indistinct paler, rarely whitish, subterminal spot." Thus Dwight (1900) obviously erred in stating that the female Black-throated Blue Warbler in "first winter plumage" (= first basic plumage) lacks the "white blotches" in the tail he described for the adult. The Youngstown specimen, by having the indistinct light patch on the *two* outermost pairs of rectrices, actually has more tail markings than called for by Ridgway. Examination of additional specimens indicates that such markings on the second outermost rectrices are not uncommon in adult females, but no other first-year female matched the Youngstown bird. In any case, few if any females of this species would be identifiable using Ridgway's key, which calls for all *Dendroica* except *pharetra* to have "a distinct patch or spot of white" on the lateral rectrices. In only a few adult female specimens are these spots anything like "distinct."

The most detailed plumage descriptions that have appeared in the literature of North American birds since Ridgway are those of Oberholser (1974). His description of the rectrices of the female Black-throated Blue Warbler is accurate, but he failed to note that the white spot at the base of the primaries may sometimes be lacking. Neither Oberholser nor Ridgway nor any of the other descriptions I have read makes any allowance for absence of the whitish or yellowish superciliary line; in fact, field guide descriptions and book illustrations in general indicate this line as highly conspicuous. In the Youngstown specimen the pale superciliary is almost completely lacking, and it undoubtedly would have been invisible under field conditions. The specimen is asymmetrical in its facial markings. On the left side there are grayish white feathers only immediately above and below the eye, nowhere near closely enough approaching to be called an eyering. On the right side, four or five feathers posterior to the supraorbital mark are whitish *at the base only,* so that no light "line" is visible when the feathers are lying in their normal position. Oddly enough, I find that asymmetry in the relative development of the superciliary line is fairly common in both age classes of females of this species.

The only color plate I have seen that portrays both the adult and "immature" females of the Black-throated Blue Warbler is that of Peterson (1947), in which the

under tail coverts are shown as whitish in both age classes. Robbins (1964) describes the underparts of adult females as "pale buffy yellowish" and their under tail coverts as "cream." He gives no general underparts color for "immature" females, but describes the under tail coverts as "yellowish." In virtually all of 30 female specimens of the nominate race (not counting nestlings), the under tail coverts are either concolorous with the lower abdomen or noticeably paler. In the Youngstown specimen, the crissum is distinctly of a richer buff than the adjacent lower abdomen, which is whiter than the more anterior underparts. This brightness of the under tail coverts, together with the reduction or absence of markings already described, led briefly to a consideration of the Common Yellowthroat *Geothlypis trichas* as the other parent while the hybrid theory was still entertained.

The Youngstown specimen is *structurally* typical of the Black-throated Blue Warbler, and it must simply be considered as a variant of that species — there is no need to invoke hybrid origin. Descriptions of females in their first fall should be amended to include the possibility of the superciliary line as well as the white wingspot being absent, and the under tail coverts being noticeably richer buff than the abdomen. When compared with the rest of the series in Carnegie Museum of Natural History, the Youngstown specimen is seen to exhibit the extreme condition in both of these characters. It is approached in crissum color by a specimen from Roswell, Georgia collected 28 October 1917, and in reduction of the superciliary by one collected at Beaver, Pennsylvania on 16 September 1909.

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