Yellow-rumped Warblers: An Under-Appreciated Field Identification Problem

Tony Leukering

When is a Colorado Yellow-rumped Warbler (*Setophaga coronata*) referable to neither Myrtle nor Audubon's? When it combines genes of both!

In Colorado, we birders are fairly savvy when it comes to identifying birds to the subspecies level, what with birding in a biogeographic wonderland of East meets West. We are also fairly comfortable with the incredible variety of hybrids that we encounter (geese, ducks, gulls, woodpeckers, warblers, sparrows), which is also due, at least partly, to that aforementioned wonderland. In fact, Colorado's birders can claim a few first reported occurrences of bird hybrids: Downy × Hairy Woodpecker, Hooded × Yellow Warbler, and American Tree × Harris's Sparrow. So, what better, here, than hybridizing subspecies?

In this essay, "Yellow-rumped Warbler" refers to the species as a whole, that is, the term includes both subspecies discussed, while "Myrtle" refers solely to the "eastern" subspecies (*S. c. coronata*) and "Audubon's" refers solely to the "western" subspecies (*S. c. auduboni*). I here follow the taxonomic treatment of the species by Pyle (1997), which considers each "subspecies group" to be comprised of just a single subspecies. Both subspecies share the large, well-defined yellow patch on the rump and, when present, yellow patches on the upper sides of the underparts (occasionally erroneously termed "shoulder"), and black streaking on backs of brown (basic plumage) or bluish-gray (alternate plumage; see Leukering 2010 for discussion of plumages). Beware that Magnolia Warbler shares a fair few plumage characters with Yellow-rumped Warbler (particularly Audubon's), including a yellow rump. However, Magnolia has a smaller, less-obvious yellow rump patch; extensive yellow on the sides; more-extensive streaking below; and, in males, the back is black or extensively so. Finally, due to the difficulty in describing sounds in a textual medium, I treat vocalizations here only briefly, though acknowledge that the call notes of the two subspecies are easily separable, particularly with experience.

The Problem

Because both Myrtle and Audubon's warblers are common and

widespread in the state (though with proportions of the two varying from east to west), and because Yellow-rumped Warblers are so distinctive among the family, many birders tend to focus little actual identification effort on them. We hear the distinctively different call notes or see the distinctively different throat colors, make a quick assessment of subspecies, and move on in the search for the next, more-interesting warbler in the flock. However, the main problem that is discussed here is that hybrid Myrtle × Audubon's Warblers are frequent in Colorado during migration (Figure 1). Given that such hybrids can express virtually any combination or blending of parental plumage characters, a yellow throat does not necessarily an Audubon's Warbler make.

The Solution

As for virtually all field-identification problems, the solution is simply paying more and closer attention, with the various field characters firmly in the brain's forefront. As a basis for detecting hybrid Yellow-rumped Warblers (or Yellow-rumpeds), I provide a synopsis of the *many* characters that enable differentiation of Myrtle and Audubon's subspecies in Colorado (and most of the rest of the country). As in most taxa in which one can (fairly) easily determine the sexes in the field, discerning the subspecies of adult male Yellow-rumpeds is easier than in immature females, some very drab individuals of which may be impossible to assign without superb, extended, close-range views. For illustration of the following characters delineation, refer to Figures 2–6.

Forehead coloration is blue-gray in most Yellow-rumpeds, though extensively black in at least some male Audubon's in alternate (breeding; see Leukering 2010) plumage.

The supercilium is typically obvious and white, whitish, or pale buff in Myrtle, but reduced to a more-or-less faint hint immediately above and behind the eye in Audubon's.

The ear surround, which is the extension of the throat coloration to the back and upward partially behind the auriculars, is white, whitish, or pale buff in Myrtle (though can be nearly absent in some immature females) and absent in Audubon's.

Throat color is typically white in Myrtle (though see below) and yellow in Audubon's, with females of both subspecies having this color duller. This character seems often to be the primary (or only?) character used in identifying Yellow-rumpeds to subspecies in the field. In fact, it seems a widespread belief that any Yellow-rumped in the fall without a yellow throat is a Myrtle, when, in fact, many (most?) immature female Audubon's lack yellow on the throat at that

time (pers. obs., Stephenson and Whittle 2013, Sibley 2014), the throat being a dull buffy color. As some immature female Myrtles sport throat color nearly as dull as this, paying attention to other characters is critical to correct identification of such birds.

The chest color and pattern in alternate-plumaged adult males is nearly solidly black in Audubon's, while more streaky in Myrtle. In females, the chest is variably streaky, but with Audubon's perhaps averaging streakier.

The greater coverts are extensively fringed with white in Audubon's, with those fringes so wide on adult males as to create a nearly solid block of white color (then called a "wing panel"). The narrower fringes of these feathers on female Audubon's typically create a "venetian-blind effect" of alternating vertical bands of pale and dark connecting the two wing bars. Myrtle completely lacks obvious white edges to the greater coverts (though they are pale gray), creating two obviously separated wing bars. Juveniles and immatures in formative plumage (see Leukering 2010) of both subspecies sport dull tips (not white) to at least some of the greater and median coverts (the two tracts of feathers forming the wing bars).

Tail spots – By age-sex class, Audubon's averages more and larger white tail spots than does Myrtle—adults and males having larger and more tail spots than immatures and females. The individual variability in this feature and the general difficulty in counting tail spots makes this character difficult to use. If one gets a chance to both determine the bird's age/sex class and count individual tail spots, the feature is probably useful, although if one has seen an individual that well, there are probably numerous other characters that would point to the correct identification well before the tail spots are counted. Regardless, those with five tail spots per side are certainly adult male Audubon's, those with four spots per side are probably Audubon's, and those with just two per side are probably female Myrtles.

Hybrids

Vocalizations – Though there has been little effort put into analyzing vocalizations of hybrid Yellow-rumpeds, two points suggest that these may have little usefulness in differentiating between hybrids and "pure" parental types, except where there is a mismatch between call and plumage. The first is that call notes of most oscine passerines (that is, most everything in an ABA-area field guide after the flycatchers) are thought to be innate, coded on the genes. Presumably, a hybrid could inherit its call notes from either parent, perhaps both. Since we know not whether vocalizations are coded on the same genes as is plumage, it is entirely possible that a virtually

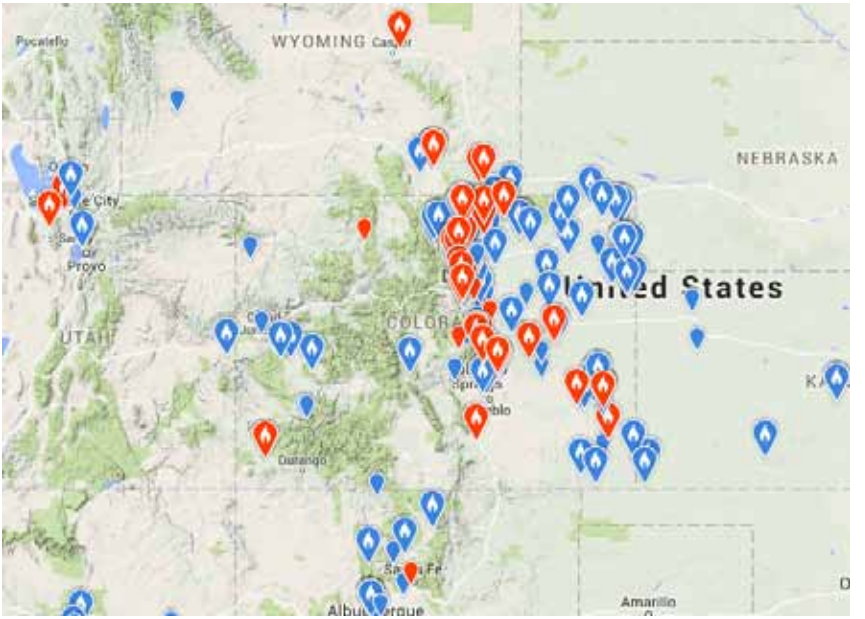

Fig. 1. Distribution in eBird (www.ebird.org) of Myrtle × Audubon's Warbler hybrids in Colorado and surrounding area (accessed 27 May 2016). The preponderance of occurrence in eastern Colorado versus that of elsewhere on the map is primarily due to the much greater abundance of birders there relative to elsewhere on the map.

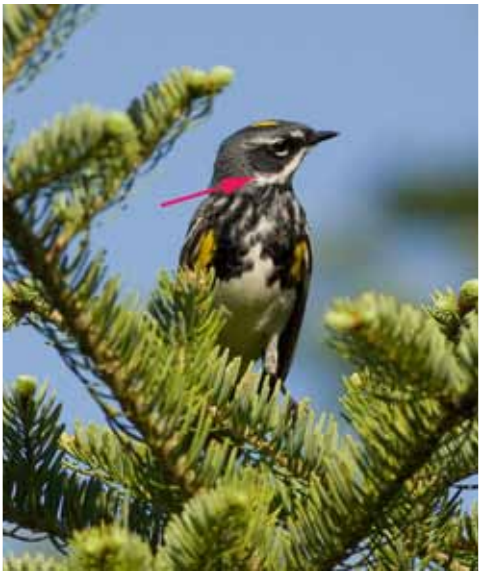

Fig. 2. This alternate-plumaged adult male Myrtle Warbler is typical in exhibiting fairly extensive white on the head—superciliary, ear surround (arrow), and throat—and a streaky chest. Franklin County, Maine, 20 May 2012 (http://ebird.org/ebird/view/checklist?subID=S10802095). Photo by Ian Davies

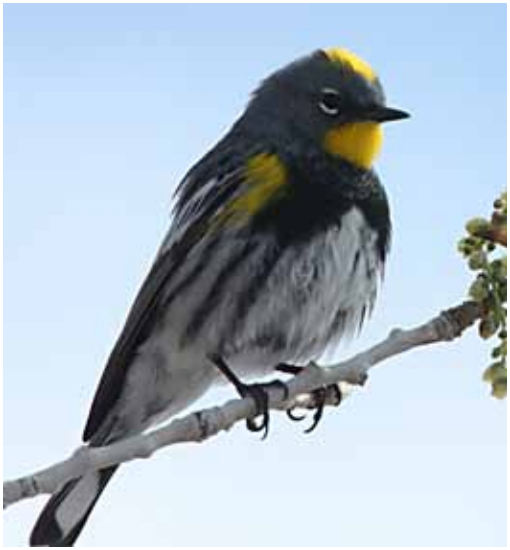

Fig. 3. This alternate-plumaged adult male Yellow-rumped Warbler shows the characters typical of Audubon's: dearth of white on the face (lacking a contrasting superciliary and ear surround; compare latter to bird in Figure 1); solid black chest; and large, white wing panel. Chatfield S.P., Douglas County, CO, 27 April 2009. Photo by Loch Kilpatrick

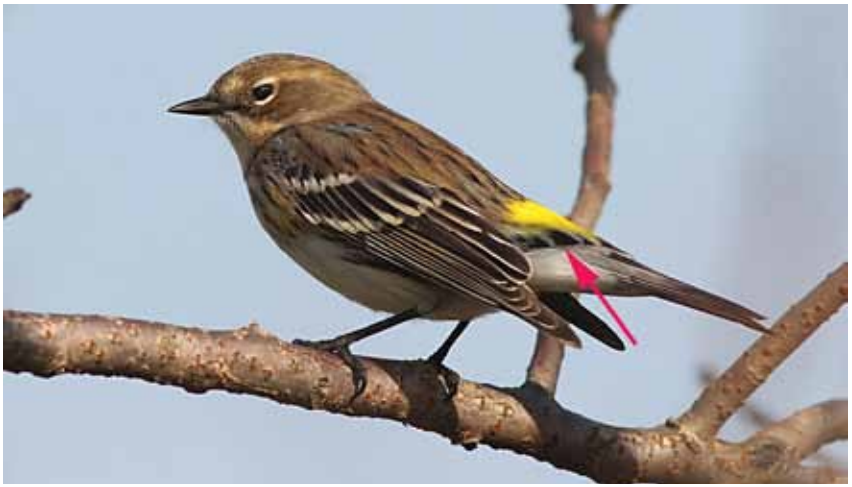

Fig. 4. In basic plumage, the age and sex of Yellow-rumped Warblers, such as this adult male Myrtle Warbler, can be difficult to determine in the field. However, note the bit of gray on the upper scapulars and at the wrist. Particularly note the upper tail coverts, which are mostly black (arrow). Immature Yellow-rumped Warblers exhibit only narrow black shaft streaks on otherwise brownish upper tail coverts, while adult females of such show an intermediate pattern. The subspecies is readily determined, with assistance of the known age and sex, by the obvious superciliary (despite its non-white color), noticeable ear surround, and whitish throat. Cape May Point S.P., Cape May County, NJ, 31 October 2010. Photo by Tony Leukering

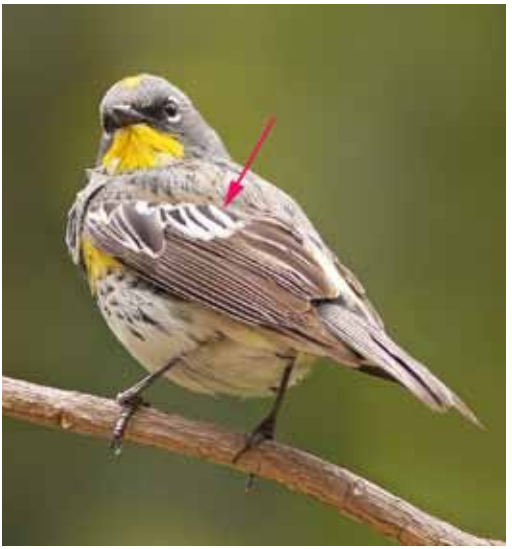

Fig. 5. This Yellow-rumped Warbler's dearth of white on the head (excepting eye arcs) and bright yellow throat, but otherwise dullish plumage identify it as a female Audubon's Warbler. Note the wide, white fringes to the greater coverts (arrow). San Diego, San Diego County, CA, 4 April 2014. Photo by Glenn Giroir

Myrtle-like hybrid could give Audubon's call notes. The second is that most oscine passerines learn their songs from conspecifics, often from the father, with some apparent genetic basis to the *recognition* of the song as the one that it should sing (Pettingill 1970, Kroodsma 2005:43). Thus, a hybrid could learn the song of whichever subspecies (or hybrid) represented by the male parent.

Appearance – As one might expect, the appearance of hybrid Yellow-rumpeds can vary from virtually Myrtle-like to virtually Audubon's-like, with only close and extensive scrutiny of some such birds enabling differentiation from parental forms. However, they are not all tricky; some are quite obvious, even to those birders who look only at the throat. In Figures 7–10 (back cover), I present four examples of hybrid Yellow-rumpeds that run much of the gamut of appearance of such birds. Those figure captions provide explanation as to how the birds are determined to be hybrids.

ACKNOWLEDGMENTS

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Fig. 7 (back cover). The strong ear surround, streaky chest, and well-separated wing bars on this adult male Yellow-rumped Warbler suggest the Myrtle subspecies. However, note that the supercilium is reduced relative to that of typical Myrtle Warblers and that even a quick glance at this bird's mix of yellow and white on the throat would enable the determination of this bird as a hybrid Myrtle × Audubon's Warbler. Flagler S.W.A., Kit Carson County, CO, 27 April 2013. Photo by Steve Mlodinow

Fig. 8 (back cover). With its extensively white throat, streaky chest and, at-least-partial ear surround, this male Yellow-rumped Warbler might readily be identified in the field as a Myrtle Warbler. However, note that the supercilium is nearly absent, there is some yellow in the throat, the ear surround is reduced, and the greater coverts have fairly wide white fringes, all features pointing to the correct identification as a Myrtle × Audubon's Warbler hybrid. Stulp Farm, Prowers County, CO, 14 April 2016 (http://ebird.org/ebird/view/checklist?subID=S28939674). Photo by Tony Leukering

Fig. 9 (back cover). This yellow-throated Yellow-rumped Warbler might very well be identified as an Audubon's in the field, but note the extensive supercilium and the suggestion of an ear surround on this Myrtle × Audubon's Warbler hybrid. Longmont, Boulder Co., CO, 20 October 2011. Photo by Steve Mlodinow

Fig. 10 (back cover). This bird's mostly white throat might suggest Myrtle Warbler to many. However, note the lack of a supercilium, nearly no ear surround, and the bit of yellow on the throat on this Myrtle × Audubon's Warbler hybrid. Estero San Jose, Baja California Sur, Mexico, 11 January 2016. Photo by Steve Mlodinow

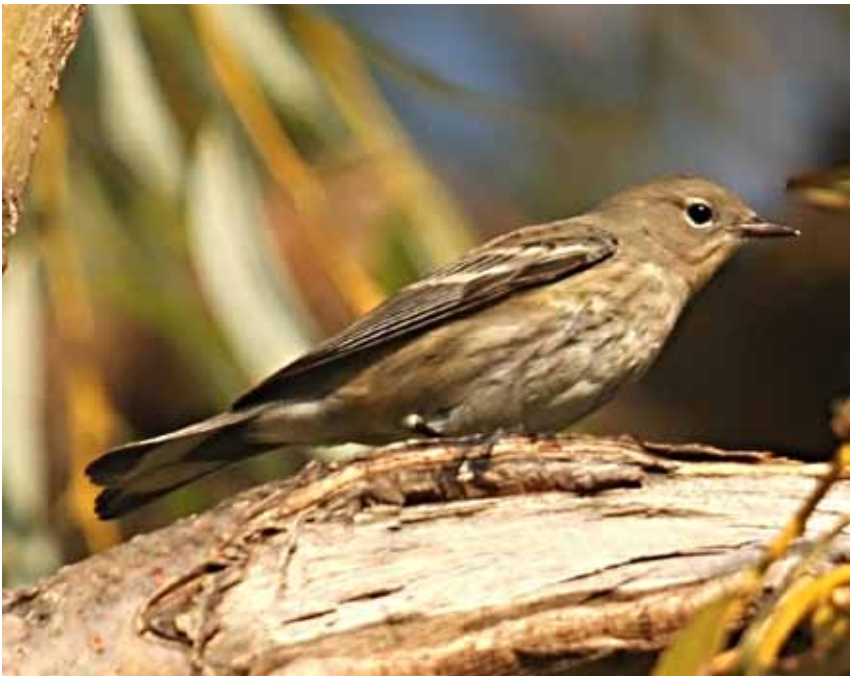

Fig. 6. Representing about the dullest of plumage of the subspecies, this immature female Audubon's Warbler has only a suggestion of yellow on the throat and sides. Note also the lack of white on the head, except for the eye arcs and that some immature female Myrtle Warblers can approach this appearance, though generally lack the suggestion of yellow on the throat. As the observer noted, "The call note was helpful!" Boston, Suffolk County, MA, 3 December 2012 (http://ebird.org/ebird/view/checklist?subID=S12212408). Photo by Marshall J. Iliff

Fig. 7

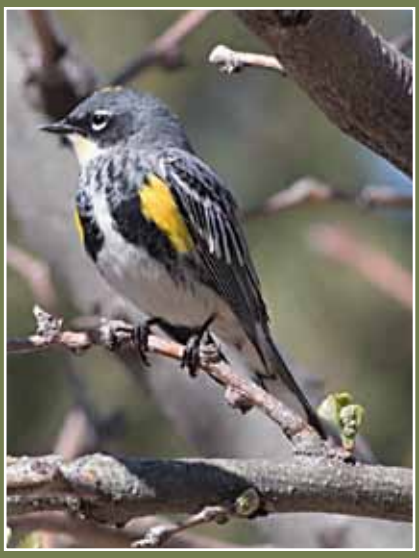

Fig. 8

Fig. 9

Fig. 10