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Abstracts

SHORT COMMUNICATIONS

USING COLOR TO DEFINE SPECIES BOUNDARIES: QUANTITATIVE ANALYSIS IN THE ORCHARD ORIOLE COMPLEX SUPPORTS THE RECOGNITION OF TWO SPECIES

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Abstract. The recent divergence of Orchard (*Icterus spurius spurius*) and Fuertes's Orioles (*I. s. fuertesi*) makes them an ideal system for investigating species boundaries. Orchard and Fuertes's Orioles differ in several respects. They have distinct breeding ranges—Fuertes's Orioles breed in eastern coastal Mexico, whereas Orchard Orioles breed throughout eastern and central North America—and differ in plumage coloration, with adult male Orchard Orioles appearing “chestnut” and Fuertes's Orioles “ochre.” However, no detailed quantitative color analyses have been conducted. To characterize these differences we quantitatively measured plumage color using reflectance spectrometry. The colored plumages of adult male Orchard and Fuertes's Orioles have unique spectral characteristics, with no color overlap between them. Combined with life history differences and previous molecular studies, these findings support the classification of Orchard and Fuertes's Orioles as separate species. Additionally, this study demonstrates the utility of quantitative color measurement as a tool for examining species boundaries.

Key words: Fuertes's Oriole, *Icterus spurius fuertesi*, *Icterus spurius spurius*, Orchard Oriole, plumage coloration, reflectance spectrometry, species boundaries.