

AN UNUSUAL BACHMAN'S SPARROW NETTED DURING THE BREEDING SEASON IN PENINSULAR FLORIDA

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Bachman's Sparrows (*Peucaea aestivalis*) exhibit striking variation in plumage throughout their North American range (Dunning et al. 2018). Individuals that breed in peninsular Florida (*P. a. aestivalis*) have dull gray chests, have feathers with blackish centers along the dorsum, and are much darker overall than individuals found elsewhere (Stevenson and Anderson 1994). The plumage brightens moving north and west and shifts from a reddish-brown dorsum in northwest Florida (*P. a. bachmani*) to brighter, chestnut-colored plumage among presumed migratory populations found in northern Texas and Oklahoma (*P. a. illinoensis*). The dorsal feathers of populations found north and west of peninsular Florida also lack the dark central line (Pyle 1997). These differences have been used to infer migration patterns of different populations as birds with the plumage associated with one region turn up in winter in areas where individuals of another plumage type breeds (Stevenson and Anderson 1994, Pyle 1997, Dunning et al. 2018).

On 27 July 2017, we were collecting blood samples from Bachman's Sparrows on Starkey Wilderness Park (Pasco County, FL) as part of a range-wide genetic assessment. We lured males into mist nets using conspecific songs, collected a small blood sample from the brachial vein, and then weighed, measured, and released individuals (Cerase et al. 2014). One of the males we captured had plumage characteristics (Fig. 1A) typically found in populations farther north and west rather than the typical plumage of birds in central Florida (Fig. 1B). The feathers lacked black centers along the dorsum, and the overall tone of the dorsum, head, and secondary feathers was much brighter with orange hues (Fig. 1A). This individual also had the chestnut-toned post-ocular stripe described for the *bachmani* species (Dunning et al. 2018), but the throat and breast were not as buffy as described for the *illinoensis* subspecies (Dunning et al. 2018).

There are a few records of unusual Bachman's Sparrows showing up in Florida during migration and winter, but no such records exist to our knowledge during the breeding season. A western-plumaged *illinoensis* sparrow died at the WCTV tower on 17 October 1958 (Tall Timbers Research Station specimen 2129) and another western plumaged *illinoensis* individual was photographed by K. Tracey at Weekiwachee Preserve in January–February 2011 (Pranty 2011). There are also records of brighter plumaged Bachman's Sparrows striking the WDBO tower near Orlando in October (Stevenson and Anderson 1994). Stevenson and Anderson (1994) also reported winter records of the brighter *bachmanii* subspecies in Dade County, Florida, and noted that these and other records helped to establish migration timing and winter haunts for this presumably migratory subspecies. Of course, migration strategies can vary markedly among individuals and populations (Hill and Renfrew 2019). Individually color-marked Bachman's Sparrows found in Georgia over-wintered on the breeding

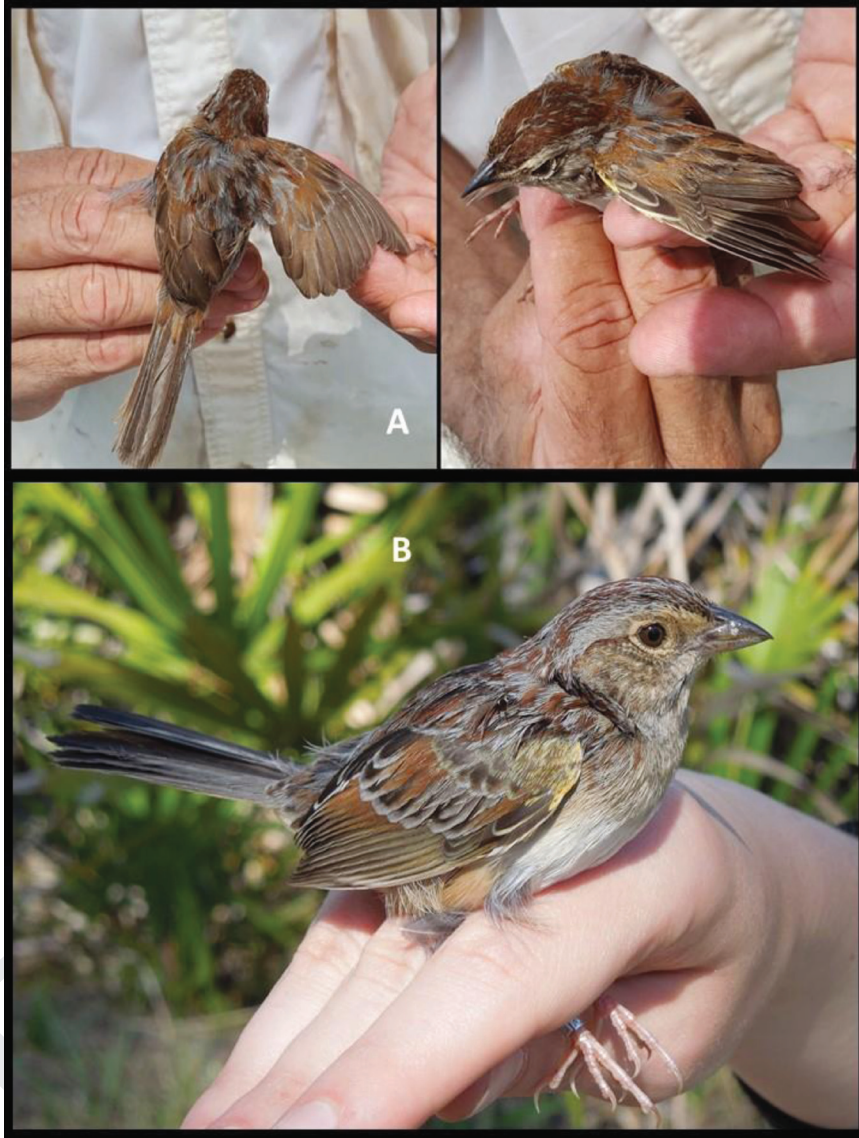


Figure 1. A) A territorial male Bachman's Sparrows netted on Starkey Wilderness Preserve, July 2017 and B) a typical central Florida plumage also netted on Starkey Wilderness Preserve, July 2017 (Pasco County).

territories they defended the previous breeding season (Cox and Jones 2009). Individuals in other populations may choose to migrate, or not, and this decision may depend on the condition of the individual (Chapman et al. 2011).

This sparrow had a distinctive plumage compared to the other individuals we sampled in central Florida ($n = 32$). The individual may have been an aberrant case of

erythrism (Griscom 1932), but the bright tones were not distributed across the breast, flank, stomach, and other areas as often occurs with erythrism. Instead, we suspect this individual may have hatched elsewhere within the species' range, undertook migration, and then chose to reside on the over-wintering grounds and attempt to breed. The male responded aggressively to the playbacks that we used (recorded from a population in north Florida) and we observed the individual defending its territory the following day against neighboring males. If this scenario is correct, it helps to corroborate results from recent genetic assessments (Cerame et al. 2014) that found gene flow throughout the range of the sparrow to be substantial. Contrary to predictions based on the range of different subspecies (Dunning et al. 2018), Cerame et al. (2014) did not observe genetic structure, even among populations separated by large, geographic barriers (e.g., Mississippi River).

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