

A case of partial leucism in the Blue-black Grassquit (*Volatinia jacarina*) from Venezuela

Un caso de leucismo parcial en el semillero brincador (*Volatinia jacarina*) en Venezuela

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Abstract

Reports of plumage aberrations in wild birds, as well as their distribution and frequency, are important because of their implications in bird conservation, since they are likely associated with environmental factors (e.g. contamination), population genetics, population size (e.g. endogamy) or nutrition (e.g. resource scarcity). This article documents a case of plumage aberration in a Blue-black Grassquit (*Volatinia jacarina*) female individual sighted and photographed in a suburban area of northern Venezuela. The aberrant individual was mostly (> 70%) white, except for the crown, wings (primary feathers and its coverts), crissum, and tail. The white plumage showed a symmetrical distribution pattern. The eyes, tarsi and beak had normal pigmentation. Based on literature consulted and a dichotomous key to identify pigmentary abnormalities, the plumage aberration corresponds to partial leucism. This record constitutes the first case of leucism for the Blue-black Grassquit in Venezuela, and adds to other observations of plumage aberration in wild birds of the Neotropical area.

Keywords: albinism, leucism, melanin, plumage aberration, Thraupidae.

Resumen

Los reportes de aberraciones del plumaje en aves silvestres, así como su distribución y frecuencia, son importantes debido a sus implicaciones en conservación, ya que pudieran estar asociados con factores ambientales (e.g. contaminación), tamaño poblacional (e.g. endogamia) o nutrición (e.g. escasez de recursos). El presente trabajo informa sobre una aberración del plumaje en una hembra del semillero brincador (*Volatinia jacarina*) avistado y fotografiado en un área suburbana del norte de Venezuela. El individuo aberrante tenía la mayor parte de su plumaje (> 70%) blanco nítido, excepto la corona, alas (plumas primarias y sus coberteras), criso y cola. El plumaje blanco mostraba un patrón simétrico de distribución, y los ojos, tarsos y pico mantenían su coloración normal. Basado en la literatura consultada y el uso de una clave dicotómica para identificar anomalías pigmentarias en las aves, la aberración del plumaje observada corresponde a un leucismo parcial. Este registro constituye el primer caso de leucismo para el semillero brincador en Venezuela, y se une a otros registros de plumajes aberrantes en aves silvestres del Neotrópico.

Palabras clave: aberraciones del plumaje, albinismo, leucismo, melanina, Thraupidae.

INFORMACIÓN SOBRE EL ARTÍCULO

Recibido:

13 de mayo de 2020

Aceptado:

8 de agosto de 2020

Editor asociado:

Sergio Alvarado Orellana

Cómo citar este documento:

Vereá C. 2020. A case of partial leucism in the Blue-black Grassquit (*Volatinia jacarina*) from Venezuela. Huitzil 21(2): e-609. DOI: <https://doi.org/10.28947/hrmo.2020.21.2.491>



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Introduction

Several plumage aberrations have been recorded worldwide (Van Grouw 2006). Of these, leucism is the most frequent plumage aberration reported in scientific publications (Cadena-Ortíz et al. 2015, Herrera 2017). The aberration is recognized by the absence of pigments in some or all feathers of the body, which can make the affected birds, look partially or totally white (Herrera 2017, Van Grouw 2018). However, the color of the soft parts (skin, feet, and eyes) remains, which differentiates leucism from albinism (Van Grouw 2013, 2018, Herrera 2017). Despite this, leucism can be difficult to diagnose from progressive greying, a plumage aberration associated to bird age (Sainz-Borgo et al. 2016), environmental conditions or pigmentation diseases (Van Grouw 2018). Indeed, many published records of leucism might truly be progressive greying (Van Grouw 2013), and it could be the pigmentary abnormality with the greatest prevalence among birds (Van der Heyden 2018, Mora and Campos-Loría 2020). In birds with dark or black plumage, such as the Blue-black Grassquit, both leucism and other similar anomalies are more conspicuous because of the high contrast that they generate (Escola et al. 2014). Although variations in this plumage coloration pattern are not uncommon (Gaiotti et al. 2011), they have few observations in Neotropical wild bird species (Piacentini 2001). Birds with black plumage and leucism records in the Neotropics include about 14 species: the Neotropic Cormorant (*Phalacrocorax brasiliensis*) (Mallet-Rodrigues 2001, Espinal et al. 2011, Fuentes and González-Acuña 2011, Escola et al. 2014), the Magnificent Frigatebird (*Fregata magnificens*) (Bermúdez-Villapol et al. 2019), the Andean Condor (*Vultur gryphus*) (Pavez 2008), the Black Vulture (*Coragyps atratus*) (Ernst 1884, Hosner and Lebbin 2006, Sousa et al. 2009), the Turkey Vulture (*Cathartes aura*) (Ferrer-Sánchez and Rodríguez-Estrella 2014, Zeiger et al. 2017), the Shiny Cowbird (*Molothrus bonariensis*) (Fuentes and González-Acuña 2011, Cadena-Ortíz et al. 2015), the Brown-headed Cowbird (*M. ater*) (Hernández et al. 2016), the Bronzed Cowbird (*M. aeneus*), the Groove-billed ani (*Crotophaga sulcirostris*) (Cadena-Ortíz et al. 2015, Rodríguez-Ruíz et al. 2017), the Smooth-billed ani (*C. ani*), the Black Flowerpiercer (*Diglossa humeralis*), the Small Ground Finch (*Geospiza fuliginosa*), the Glossy-black Thrush (*Turdus serranus*) (Cadena-Ortíz et al. 2015), and the Yellow-legged Thrush (*T. flavipes*) (Verea et al. 2016).

In Venezuela, the first report of a plumage aberration comes from an albino Black Vulture (Ernst 1884). Other plumage aberrations (leucism, brown, blue, opalin, ino, progressive greying and pheomelanism) have been also reported in

Venezuelan birds (Sainz-Borgo et al. 2016). Among leucistic birds, 13 species with total or partial leucism have records in the country: the Neotropic Cormorant (Escola et al. 2014), the Brown Pelican (*Pelecanus occidentalis*) (Muñoz et al. 2015), the Plain-flanked Rail (*Rallus wetmorei*) (Rodríguez-Ferraro et al. 2009), the Magnificent Frigatebird (Bermúdez-Villapol et al. 2019), the Red-crowned Woodpecker (*Melanerpes rubricapillus*), the Caribbean Hornero (*Furnarius leucopus*), the Northern Scrub-flycatcher (*Sublegatus arenarum*) (Sainz-Borgo et al. 2016), the Streaked Flycatcher (*Myiodynastes maculatus*), the Black-crowned Tityra (*Tityra inquisitor*) (Hernández et al. 2009), the Brown-chested Martin (*Progne tapera*) (Sainz-Borgo et al. 2016), the Spectacled Thrush (*Turdus nudigenis*) (Fernández-Yépez 1953, Sainz-Borgo et al. 2016, Verea et al. 2016), the Black-Hooded Thrush (*T. olivater*) and the Yellow-legged Thrush (*T. flavipes*) (Verea et al. 2016). However, there are no previous records of the Blue-black Grassquit having leucism (total or partial) or another plumage aberration in the country.

The Blue-black Grassquit *Volatinia jacarina* (Thraupidae), popularly known in Venezuela as Semillero Chirrí (Verea et al. 2019), is a widespread species that inhabits xerophytic and open areas, especially grasslands and forest edges (Meyer de Schauensee y Phelps 1978), as well as near residential and agricultural spaces (ricefields, cornfields), particularly where Guinea grass (*Megathyrsus maximus*, Poaceae) grows (C. Verea, per. obser.). In this dichromatic species, the male has a blackish blue iridescent plumage; while the female is mostly brown (Meyer de Schauensee y Phelps 1978). This species already has a plumage aberration report called “arlequin coloration” from Brazil (Gaiotti et al. 2011). Since reports of plumage aberration in wild birds, as well as their distribution and frequency, have important conservation implications because they may be associated with environmental factors (e.g. contamination), population size (e.g. endogamy) or nutrition (e.g. resource scarcity) (Cadena-Ortíz et al. 2015), this article documents a case of partial leucism in a Blue-black Grassquit female individual sighted and photographed in a suburban area of northern Venezuela.

Record

The record area is located in the SE suburbs of Caracas, at Los Naranjos farm, El Hatillo County, Miranda state, northern Venezuela (10°26'14" N; 66°47'27" W), about 900 masl. This area used to be an old poultry farm, and it is mostly covered by Guinea grass and a few fruit trees such as citrus and avocado (Verea 2016). On October 21, 2018 at early morning (07:00

h), while a Blue-black Grassquit male was sighted jumping on an avocado branch, an odd female individual with plumage mostly white, suddenly emerged from the base of a tangled Guinea grass patch, and it perched on a spike of the grass itself (Figure 1). For a space of five minutes, assisted by a Swarovski binoculars (10X40) and a Nikon Coolpix P500 camera, I observed and photographed the mentioned individual while it preened its feathers (Figure 1). After this time, the aberrant individual flew away. Its plumage was mostly (> 70%) impeccable white, except for the crown, wings (primary feathers and its coverts), crissum, and tail (Figures 1a, b). The white plumage also showed a symmetrical pattern. The eyes, tarsi and beak had a normal pigmentation. In addition, its tail feathers were worn. Based on the mutation definitions given by Van Grouw (2013), and a dichotomous key proposed by Rodríguez-Ruíz et al. (2017) to identify pigmentary abnormalities, the plumage aberration observed corresponded to a partial leucism.

Discussion

The first record of an aberrant coloration in a wild-living Blue-black Grassquit was reported by Gaiotti et al. (2011) in Brazil. That plumage aberration called “arlequin coloration” was also found in a female individual. It was described as a total suppression of melanin in the bird’s head, and the plumage coloration turned very clear, almost yellow across the head and many dorsal clear spots (Gaiotti et al. 2011). Although Corrêa et al. (2013) later considered such an aberration as a case of leucism, the yellow pigmentation mentioned in the description is odd. Thus, it is likely not a case of leucism either. Coloration aberrations are often misunderstood and therefore confused and misidentified (Herrera 2017). Recently, an additional un-

published record, involving an adult male of the Blue-black Grassquit apparently with partial leucism (both wings white), was photographed in Costa Rica (Astorga 2017), but further details about this record are unknown. Nevertheless, the present record in the Blue-black Grassquit is typically a case of partial leucism (Figure 1a, b). The plumage of a female Blue-black Grassquit is dark olive brown, with some black spots; the wings and tail are blackish brown; buffy brown beneath, with a brown streaked chest (Meyer de Schauensee y Phelps 1978), without white parts (Figure 1c). The recorded individual had white feathers distributed symmetrically almost all over, with the eyes, tarsi, and beak in normal pigmentary condition, attributes that distinguishes it from progressive greying—the most frequent plumage abnormality that leucism is confused with (Van Grouw 2013, 2018, Mora and Campos-Loría 2020).

The present record constitutes the first case of leucism for the Blue-black Grassquit in Venezuela, and it adds to other observations of plumage aberration in wild birds of the Neotropical area.

Acknowledgments

The author wishes to acknowledge two anonymous reviewers who made interesting suggestions to improve the paper. Yelitza Breen, Laura Alvarado and Gabriela Vereá reviewed the manuscript’s English. I also confirm that there are no conflicts of interest associated with this publication.

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Figure 1. The leucistic (partial) Blue-black Grassquit female recorded in northern Venezuela (a, b). Female in normal plumage (c). A drizzle had wet the area at the time of photograph, and some shadows and spots on the crown (a) and chest (b) that appear in the pictures correspond to visual distortions. Description as in text (photos: Carlos Vereá).

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