

**RECORD OF ABERRANT PLUMAGE IN *Turdus rufiventris* AND *Mimus saturninus* (AVES:
PASSERIFORMES) IN SOUTHERN BRAZIL**

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ABSTRACT

Aberrant colorations are not considered unusual events in nature. Recently, several cases have been reported in articles and/or notes of scientific communication, thus contributing to the knowledge about these mutations in wildlife and reporting the affected species. Here, we bring two new records of wild birds with aberrant plumage in southern Brazil: one record of a leucistic Rufous-bellied Thrush (*Turdus rufiventris*) individual and the first record of progressive greying in the Chalk-browed Mockingbird (*Mimus saturninus*).

Keywords: Chromatic Anomaly; Leucism; Mimidae; Turdidae; Progressive Greying.

RESUMO

Registro de plumagem aberrante em *Turdus rufiventris* e *Mimus saturninus* (Aves: Passeriformes), no sul do Brasil. Colorações aberrantes não são considerados eventos incomuns na natureza. Nota-se que recentemente diversos casos vêm sendo reportados em artigos e/ou notas de comunicação científica, preenchendo assim o conhecimento sobre os padrões apresentados e as respectivas espécies afetadas. Neste sentido, o presente estudo apresenta dois novos registros de aves com plumagem aberrante no sul do Brasil. Um indivíduo de sabiá-laranjeira (*Turdus rufiventris*) com leucismo total e o primeiro registro de progressivo acinzentado em sabiá-do-campo (*Mimus saturninus*).

Palavras-chave: Anomalia Cromática; Leucismo; Mimidae, Turdidae; Progressivo Acinzentado.

INTRODUCTION

Aberrant colorations in birds have been widely described in nature by many authors worldwide. However, there is a need of attention regarding the correct identification of the plumage anomaly, since the mutant phenotype is distinct for each species (van Grouw et al., 2011; van Grow, 2013). In general, birds that show a whitish pattern of aberrant coloration are often reported as albinos or leucistics. However, some cases of birds reported as leucistic can be individuals affected by progressive greying (van Grouw et al., 2011; van Grouw, 2018).

Albinism is defined by the absence of the tyrosinase enzyme, which plays an important role in the synthesis of melanin pigments (eumelanin and pheomelanin), which causes the loss of all pigments in

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the original plumage of the species, presenting a white (colorless) plumage and depigmentation in naked parts. Furthermore, individuals affected by this kind of mutation have red eyes (Buckley, 1982; van Grouw, 2006). In rare cases in birds, the affected species may show a white (colorless) pattern only in some parts of the plumage, and depigmentation of bare parts. However, the eyes must be red (van Grouw, 2006; 2013).

In leucism, melanin synthesis interrupted, altering the production (or deposition) of this pigment in the tissues, which may occur in two ways: total or partial leucism (Moller and Mousseau, 2001; van Grouw, 2018). In total leucism, the affected individual shows total depigmentation of feathers to a white hue and depending on the missing pigments, naked parts can be affected, with eyes remaining normal (van Grouw, 2013; 2018). In partial leucism, some depigmented white feathers (symmetrically bilaterally) occur along with those of normal color along the individual's body. The naked parts and the eyes are apparently normal (van Grouw, 2018). In progressive greying, there is a lack of melanin in only some parts of the plumage, due to the progressive loss of this pigment. Most forms do not appear to be hereditary. In general, the affected individuals show whitish feathers mixed with those of normal color, and the eyes and naked parts are normally colored (van Grouw, 2012; 2013; 2018).

The Rufous-bellied Thrush *Turdus rufiventris* Vieillot, 1818 (Passeriformes: Turdidae), occurs in Brazil, Uruguay, Paraguay and Argentina. It inhabits the edges of forests, open wooded areas, urban parks and gardens. The plumage is basically brown and the belly is rust red to orange. Light and dark striated throat, tarsus and feet in grayish-pink to grayish-brown. It has no apparent sexual dimorphism (Belton, 1994; Sick, 1997; Sigrist, 2014). The Chalk-browed Mockingbird *Mimus saturninus* (Lichtenstein, 1823) (Passeriformes: Mimidae), occurs in Brazil, Uruguay, Paraguay, Argentina and Bolivia. It is found in open areas in rural and urban environments. The plumage of this species is predominantly gray on the upper parts and top of the head, wings and tail, whereas the under parts (belly and chest) shows a yellowish-white coloration, and it has a superciliary white list that contrasts with a black band at the eyes region (Belton, 1994; Sick, 1997; Sigrist, 2014).

OCCURRENCE DESCRIPTION

On July 13, 2015, an adult individual of *T. rufiventris* of undetermined sex with aberrant coloring was observed in the urban perimeter of Santa Cruz do Sul, RS, Brazil (40°45'36"S, 73°59'2.4"W). The region is inserted in the transition between the biome Pampa and the Atlantic Forest, with intense anthropic pressure due to urban areas and land use (IBGE, 2004). It had all feathers depigmented to a white color. Bare parts and eyes remained in normal color. A second record of a bird with an aberrant color in Santa Cruz do Sul was also made in an urban area (29°41'52"S, 52°26'18"W). An adult individual of *M. saturninus* of undetermined sex with some white feathers mixed with normal-colored ones, along the head, neck, neck and chest. Bare parts and eyes were normally colored. By checking descriptions in van Grouw (2006; 2012; 2013; 2018), we identified a case of total leucism for *T. rufiventris*, and a case of progressive mutation for *M. saturninus* (Figure 1).

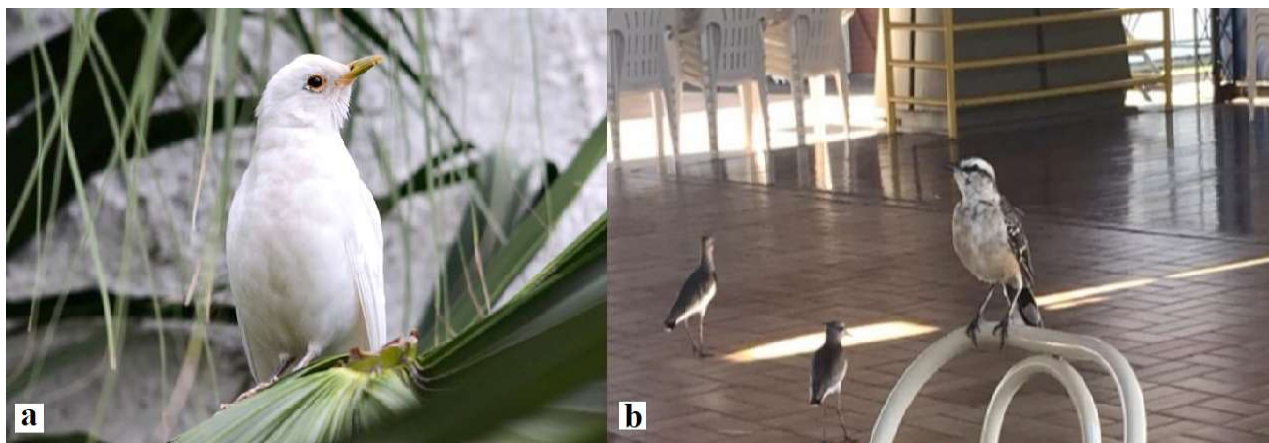


Figure 1. (A) Leucistic individual of *Turdus rufiventris* (Photo: Christofer Dalla Lana). (B) *Mimus saturninus* individual with progressive greying. (Photo: Tainá Schütz). Both records were made in an urbanized area, in the municipality of Santa Cruz do Sul, Rio Grande do Sul, Brazil.

In Argentina, Urcula (2011) mentions a specimen of *M. saturninus* with leucism, and some cases of aberrant coloring in *T. rufiventris*, specifically albinism and leucism, were reported in the Brazilian territory by Veiga and Pardo (1990), Piacentini (2001), Júnior et al. (2008), Santos et al. (2008), Júnior and Corrêa (2017), and Mohr et al. (2017).

These events are not uncommon in nature (van Grouw et al., 2011), and in the State of Rio Grande do Sul, several cases of birds with aberrant coloring have recently been reported, for instance: Corrêa et al. (2012), Düpont et al. (2014), Corrêa et al. (2017), Júnior and Corrêa (2017), Mohr et al. (2017) and Vieira et al. (2018). However, we believe that in the State there should be more than 20 records already published of birds presenting some chromatic anomaly in the plumage. According to van Grouw (2006; 2013), these events must be documented in the literature, reporting patterns of aberrant plumage that affected specimens present, collaborating with obtaining data on free-living animals, distribution and sex ratio (if there is sexual dimorphism) of species affected by aberrant colorations. Finally, we encourage the documentation of these events when observed in nature, and also suggest the elaboration of a review study listing all cases of birds with aberrant plumage in the Rio Grande do Sul State.

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