A RECORD OF PARTIAL MELANISM IN *AGELAIOIDES BADIUS* (ICTERIDAE) IN SOUTHERN BRAZIL

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RESUMO

Apresentamos o registro da ocorrência de melanismo parcial em um espécime de *Agelaioides badius*, no Município de São Sepé, região central do Rio Grande do Sul.

Palavras-chaves: Plumagem aberrante; Icteridae; Asa-de-telha; Rio Grande do Sul.

ABSTRACT

We present the occurrence of partial melanism in one specimen of *Agelaioides badius*, in São Sepé county, central region in the state of Rio Grande do Sul, Southern Brazil.

Keywords: Aberrant plumage; Icteridae; Bay-winged Cowbird; Rio Grande do Sul.

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INTRODUCTION

Agelaioides badius (Passerifomes: Icteridae) (CBRO, 2011), commonly known as the Bay-winged Cowbird, is distributed in Brazil in the states of Piauí, Ceará, Pernanbuco, Paraná (RIDGLEY & TUDOR, 1989), Minas Gerais, Mato Grosso (southern region) and Rio Grande do Sul (SICK, 1997). The full range distribution also includes Argentina, Bolivia, Uruguay, Chile and Paraguay (SICK, 1997). Living in flocks, this species commonly in habitats open fields and shrubby vegetation, throughout its disjunct range (SICK, 1997). The predominant plumage typically is brown, with black tarsus and beak, dark brown iris, brownish broad wingtips and tail; sexual dimorphism is absent in this species (BELTON, 1994, SICK, 1997).

In birds, melanistic individuals display additional melanin pigments (SAGE, 1962), produced by dendritic melanocytes in a little-known process that results in wide phenotypic variation (JONES *et al*., 2000) including irregular congenital dark spots [or patches], eumelanism (plumage with a nonuniformly darker appearance), and feomelanism (plumage with a reddish brown color) (URCOLA, 2011). Melanism is one of the main chromatic aberrations that can occur in birds (BUCKLEY, 1982). Is one of the few mutations in which there isn't loss of pigments but, on the contrary, an increase in pigment concentration (VAN GROUW, 2006). However, birds with color patterns different from the original species color have a shorter life span, being more susceptible to predators in nature (SANTOS, 1981, COLLINS, 2003). Chromatic plumage aberrations such as melanism involve mutant alleles (BENSCH *et al.*, 2000) or divergences in gene expression that result in changes in normal feather development and pigmentation (MØLLER & MOUSSAEU, 2001). Partial melanism sometimes occurs but this isn't caused by a mutation but by malnutrition, diseases or lack of exposure to sunlight. If these causes are removed, normal feathers will appear during the next moult (VAN GROUW, 2006). Melanism in birds has been reported in *Cinclus cinclus* by Jauregi *et al*. (2009); in *Athene cunicularia* by Tourón & Caballero-Sadi (2009), and in species such as *Nycticorax nycticorax*, *Baryphthengus ruficapillus*, and *Paroaria coronata* by Urcula (2011) who described the majority of the melanistic specimens for these species deposited in the ornithological collection of the Argentinean Natural Sciences Bernardino Rivadavia, as being eumelanic.

This note presents an observation of partial melanism in *A. badius* in the central region in the state of Rio Grande do Sul, southern Brazil, and it represents a new record of chromatic variation for the birds of southern Brazil.

DESCRIPTION OF THE OCCURRENCE

In May 2012 one specimen of *A. badius* displaying different plumage was observed at 07:00h within a small conspecific flock in a region known popularly as "Banhadão" (30º05'22,0"S and 53º31'54,2"W), located in the third district of São Sepé county, in the central region of Rio Grande do Sul. The observation site is characterized by slightly undulating topography (BRASIL, 1973), with vegetation mainly forming open fields and native shrubby vegetation, belonging to the Pampas biome (IBGE, 2004).

The unusual *A. badius* individual showed partial melanism is unusual individual and was darker in several places, including in the feathers of the head, neck, and back, partially in the wings, and in a large portion of the inferior surface, such as in the chest. The beak, post-ocular region, tarsus, several feathers of the wings, tail coverts and the

lower portion of the chest were all observed to be the normal color pattern for this species, as described in Sick (1997) and Belton (1994) (Figure 1).

At the moment of the observation, this bird was in a flock of five individuals, all of them showing the normal species color pattern (Figure 2). The bird was observed approximately for two hours, and during this period no uncommon behaviors were observed.

This observation of partial melanism in *A. badius* is the first registered observation of chromatic variation for this species in Southern Brazil, and thus may contribute to our understanding of this melanistic variation. To Van Grouw (2006) partial melanism couldn't be caused by a mutation. Only with the mating data we can define if there is a mutation and which is the genetic heritage involved (NEMÉSIO, 2001). A bibliographical survey was performed about the effects of melanism in variation of dimorphism and lifetime, however no data was found for this species. Nevertheless the registering of these occurrences can contribute for the understanding of species evolution processes. During the next breeding period, the same area will be visited to try to monitor the reproductive behavior and nesting success of this individual.

Figure 1 - Specimen of *Agelaioides badius* with melanism (Photo: Luiz Corrêa).

Figure 2 - Specimen of *Agelaioides badius* with melanin, with individuals of normal plumage (Photo: Luiz Corrêa).

REFERENCES

BELTON, W. **Aves do Rio Grande do Sul: distribuição e biologia**. São Leopoldo: Editora Unisinos, 1994.

BENSCH, S.; HANSON, B.; HASSELDUIST, D; NIELSEN, B. Partial albinism in a semi-isolated population of Great Reed Warblers. **Hereditas,** n**.** 133, p.167-170, 2002.

BRASIL. Ministério da Agricultur. Departamento Nacional de Pesquisa Agropecuária. **Levantamento de reconhecimento dos solos do Estado do Rio Grande do Sul**. Recife: MA/DPP-SA/DRNR/ INCRA/RS-MA/DPP-AS/DRNR. Boletim técnico n. 30. 1973.

BUCKLEY, P. A. Avian genetics. Pp.21-110. *In*: Petrak, M.L. (Ed.). **Diseases of cage and aviary birds**. Philadelphia: Lea and Febiger.1982.

CBRO - Comitê Brasileiro de Registros Ornitológicos (2011) **Lista das aves do Brasil.** 10ª ed. Disponível em <http://www.cbro.org.br>. Acesso em 02 de janeiro de 2013.

COLLINS, C. T. A leucistic Willet in California. **Western Birds,** n. 34, p. 118-119, 2003.

IBGE - Instituto Brasileiro de Geografia e Estatística. **Mapa de biomas do Brasil.** Primeira aproximação. Brasília: IBGE e Ministério do Meio Ambiente, 2004.

JAUREGI, J. I. ; CUADRADO, J. F.; ARANGUREN, I. ; SÁNCHEZ, J. M.; GOIKOETXEA, A. H.; ARIZADA, J. Mirlos acuáticos (*Cinclus cinclus*) melánicos em La región cantábrica. **Revista de Anilhamento**, n. 24, p. 34-36, 2009.

JONES, T. C., HUNT, R. D.; KING, N.W. **Patologia Veterinária.** 6ª ed. São Paulo: Editora Manole, 2000.

MØLLER, A. P.; MOUSSAEU, T. A. Albinism and phenotype of barn swallows (*Hirundo rustica*) from Chernobyl. **Evolution**, n. 55, p. 2097-2104, 2001.

NEMÉSIO, A. Plumagens aberrantes em Emberizidae neotropicais. **Tangara**, v. 1, n.1, p. 1-48, 2001.

RIDGELY, R. S.; TUDOR, G. **The Birds of South America**, Vol. I. the Oscine Passerines. Oxford University Press, U.K, 1989.

SAGE, B.L. Albinism and melanism in birds. **British Birds**, n. 55, p. 201-225, 1962.

SANTOS, T. Variantes de plumajes y malformaciones en *Turdus* spp. **Ardeola**, n. 28, p. 133-138, 1981.

SICK, H. **Ornitologia Brasileira**. 2ª ed. Rio de Janeiro: Nova Fronteira, 1997.

TOURÓN, F. H. M.; CABALLERO-SADI, D. Nuevas Contribuciones al conocimiento de lãs aves Del Uruguay: Primer registro de *Athene cunicularia* (Molina 1782) (Aves: Strigiformes) Melanica. **Boletín del Sociedade Zoologia del Uruguay**, n. 13, p. 39-42, 2009.

URCOLA, M. R. Aberraciones cromáticas en aves de la colección ornitológica Del Museo Argentino de Ciencias Naturales "Bernardino Rivadavia". **Revista del Museo Argentino Ciencias Naturales**, v. 13, n. 2, p. 221-228, 2011.

VAN GROUW, H. Not every white bird is an albino: sense and nonsense about colour aberrations in birds. **Dutch birding**, n. 28, p. 79-89, 2006.