

**A PARTIAL LEUCISM CASE IN *COLUMBINA PICUI* (TEMMINCK 1813)
(BIRDS: COLUMBIFORMS), IN SOUTH OF BRAZIL**

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RESUMO

Apresentamos o registro de um caso de leucismo parcial em *Columbina picui* no município de São Sepé, Rio Grande do Sul, Brasil.

Palavras chave: Anomalia genética, Leucismo, Rolinha-picuí, São Sepé, Rio Grande do Sul.

**UM CASO DE LEUCISMO PARCIAL EM *COLUMBINA PICUI* (Temminck
1813) (Aves: Columbiformes), NO SUL DO BRASIL**

ABSTRACT

The record of partial leucism in *Columbina picui* is presented from the municipality of São Sepé, Rio Grande do Sul, Brazil.

Keywords: Genetic disorder, Leucism, Picui Ground-Dove, São Sepé, Rio Grande do Sul.

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INTRODUCTION

Birds can present a wide range of color variation, some from biologic/ecologic character, as for example the sexual dimorfism which is showed through chromatic variation between male and female. Even different color patterns can be seen in young individuals and adults (BUCKLEY, 1982), as well individual variation occurring due to genetic mutations as xantocroism, melanism, cyanism, erytrism, leucism and albinism (SIGRIST, 2006; URCULA, 2011). The partial or total pigment loss in feathers of birds is mistakenly given as albinism by some authors, however this occurs only in the total absence of melanin. In other words not only in feathers, occurring also in the eyes and skin due to lack of tyrosinase enzyme, caused by genetic mutation (GROSS, 1965; GRILLI *et al.*, 2006; VAN GROUW, 2006).

The leucism, study object of this article, is caused by the partial or total lack of eumelanin and feomelanin in the birds feathers. Many times it is restricted to some parts of the plumage, as it havetyros in and presents dark iris, not pink or reddish as occurs in albino individuals (GROSS, 1965, AJALA and MIKKOLA, 1997; VAN GROUW, 2006; CARBÓ-RAMÍREZ *et al.*, 2011; URCULA, 2011).

Several leucism registers have been done on birds: *Thalassarche melanophris e Daption capense* (MANCINI *et al.*, 2010), *Passer domesticus* (CORRÊA *et al.*, 2011), *Volatinia jacarina* (GAIOTTI *et al.*, 2011), *Paroaria coronata* (CORRÊA *et al.*, 2012), and *Pygochelidon cyanoleuca* (GODOY, 2012), and these aim to remark the variation in color pattern and behavior. In Columbiforms, some chromatic mutations are reported by Mallet-Rodrigues (1995) in *Columbina talpacoti*, González-Acuña (2004) *Zenaida auriculata*, SANTOS *et al.* (2011) *Patagioenas picazuro* and Urcula (2011) *Columba maculosa*, *Z. auriculata* and one albino specimen in *Columbina picui*. However, *C. picui* leucism has not been reported by literature in the Southern region of Brazil.

Columbina picui commonly known as Picui Ground-dove is a Columbidae family small body size bird, which occurs from Colombia to Bolivia, Chile, Argentina, Uruguay and Brazil (SICK, 1997). This bird is known by its remarkable white tail feathers and by the contrast of black and white in the wing feathers, grayish color patterns among feathers and plumes, dark red tarsi and black beak (BELTON, 1994; SICK, 1997). In Rio Grande do Sul is considered widespread in rural and urban zones, commonly found in pairs or small bunches (BELTON, 1994).

This note presents a partial leucism case in *Columbina picui* in urban area of the municipality of São Sepé, central region of the State of Rio Grande do Sul, Brazil.

OCCURRENCE DESCRIPTION

One mutant individual of *C. picui* was seen by January 24th, 2013, in the morning (around 10 am) in a urbanized area (S 30° 09', 05" W 53° 34', 00"S), in the municipality of São Sepé, central region of Rio Grande do Sul. At the moment of this observation, this specimen was foraging in the sidewalk at the Kurtz District. The specimen was besides another individual of *C. picui*, with normal coloration (Figure 1).

For the data collection about this specimen, the effort applied was about 6 hours of direct observation during the same day of the first register using binoculars (10 x 50 lenses). Notes were taken about the general living and behavior of this bird.

The partially leucistic *C. picui* specimen is an adult with no identified gender. It shows depigmentation in part of the wing feathers, some remiges and coverts, also in some plumes and feathers by the chest and back (Figure 2). These feathers and plumes are grayish in normal individuals (BELTON, 1994). Eyes, iris, tarsi and beak, still in normal pigmentation according to Belton (1994) and Sick (1997) descriptions. By the time of observation this *C. picui* specimen didn't showed any abnormal behavior in relation to the other *C. picui* specimens.



Figure 1: Partially leucistic *C. picui* specimen (right), accompanied by one specimen in standard colors (left), in urban area of São Sepé municipality, RS. Photo: Luiz Corrêa.



Figure 2: Partially leucistic *C. picui* specimen in urban area of São Sepé, RS. Can be seen depigmentation in some feathers, plumes, coverts and remiges. Photo: Luiz Corrêa.

Is remarkable the fact that in the same surroundings (around 600 meters) was reported a leucistic specimen of *Passer domesticus*, by Corrêa *et al.* (2010). The occurrence of leucism seems to have strong relation with the urban environment (CORRÊA *et al.*, 2010; RIBEIRO and GOGLIATH, 2012). This probably can be explained by the low abundance of predators (ELLEGREN *et al.*, 1997), fact that makes natural selection less intense in urban centers, which can justify the more leucism occurrence in these areas. Some authors give more attention in the potential concentration of mutagenic compounds in these environments (MØLLER and MOUSSEAU, 2001). As this is the second report in this area, we suggest additional investigation on these constraints.

Finishing, is important to keep monitoring this free living mutant specimen by mid and long term, collecting relevant information that can explain these occurrence patterns, identifying potential causes and effects.

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