

First Case of Leucism in the House Bunting *Emberiza Sahari* in Algeria

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A SHORT COMMUNICATION

FIRST CASE OF LEUCISM IN THE HOUSE BUNTING *EMBERIZA SAHARI* IN ALGERIA

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ABSTRACT

Continue to monitor the bioecology of the House bunting in Algeria and mentioned the birds that carry abnormalities and genetic mutation (Albinism and leucism), including passerines species. A male House bunting *Emberiza sahari* with leucism (partial albinism) was recorded on December 6, 2021, in the city center of the M'Zab Valley at Ghardaïa (Algerian Sahara).

Keywords: *Emberiza sahari*, leucism, Sahara, Algeria.

INTRODUCTION

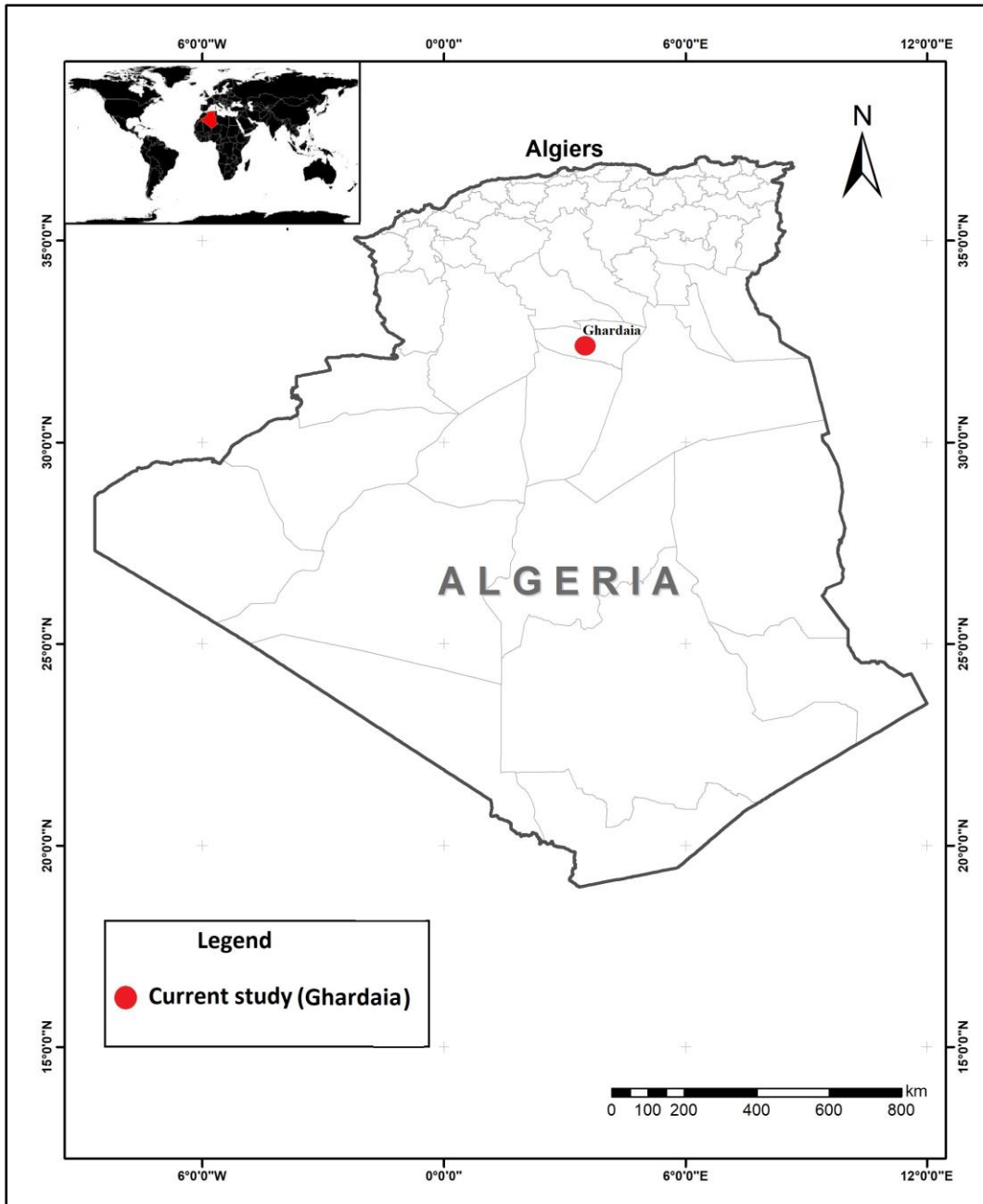
The House bunting *Emberiza sahari* is a synanthropic species, this bird enjoys special treatment from the local population locally, where sometimes they call him "Bou-Bechir", "Bou-Oud" or "Bou-Hommir" (Chedad, 2021; Chedad et al., 2021a). Two species of bunting are reported, first in Northwest of Africa (*Emberiza sahari*) and the second is distributed in Asia and Northwest of Africa (*Emberiza striolata*) (Birdlife International, 2016; Schweizer et al., 2018).

In Algeria, *Emberiza sahari* is distributed in many regions and colonizes various ecosystems, such as (Oasis, palm grove, plain, urban agglomeration...). In the northern boundary, the species is mentioned in the southern limits of the Aures Mountains and its oases, and on the Saharan Atlas. In the southern boundary, it observed in Touggourt, Ghardaïa, Biskra, M'Zab, and Megarine, the oasis of Beni Abbès and Taghit. The distribution of the

House bunting, also includes the Hoggar, Tassili, and the extreme southeast in Tindouf, the Kalaa-Beni-Hammad in Sétif, Bordj Bou-Arredj, Tissemsilt, Djelfa city, El Bayadh, Bouhman in Tlemcen, and in Algiers (El Casbah) (Heim de Balsac and Mayaud, 1962; Ledant et al., 1981; Isenmann and Mali, 2000; Chenchouni, 2010; Moulaï, 2019; Chedad, 2021; Chedad et al., 2021a; El Bouhissi et al., 2021)

Two types of albinism; partial (leucism) causing spots with white color on certain parts of the body (Schoonbroodt, 1985; Guay et al., 2012), and total albinism, which is characterized by totally white color, resulting in a snow-like body (Menon, 2003; Hayashi and Suzuki, 2018). Herein, in this present study, one more new record of House bunting with partial albinism a based on recent fieldwork performed in the M'Zab Valley (Algerian Septentrional Sahara)

Figure 1:



Observation site of partial albinism in the House bunting *Emberiza sahari*.



Figure 2: Partial albinism in a male House bunting *Emberiza sahari* in the Algerian Sahara (M'Zab Valley, Ghardaïa, Algeria).

MATERIAL AND METHODS

The M'Zab Valley at Ghardaïa, located in the Algerian Septentrional Sahara, where our study was out (Heim de Balzac and Mayaud, 1962), which is part of the Saharan bioclimatic. This region has a Saharan bioclimate, characterized by low annual rainfall (~50-70 mm), with mild winters and very hot summers (mean temperature of the coldest month is 11.5 °C; mean peak temperature in July = 35.5 °C) (Figure 1) (Chedad et al., 2021a).

As part of monitoring and mentioning the birds that carry abnormalities and genetic mutation (Albinism and leucism) in the region of Ghardaïa, seasonal surveys, with additional surveys, especially during the migration seasons of birds, where the counts were undertaken by direct observation with a Nikon Coolpix P900 camera (x83), (Chedad et al., 2021b).

RESULT

In the city center of the M'Zab Valley at Ghardaïa, (Septentrional Sahara ; 3° 40' 3.82" E, 32° 29' 23.91"N), a male House bunting, frequents since 2020 a semi-modern house, this specimen bears an unusual coloration. On December 6, 2021, this individual was found in the same place inside an inhabited house, collecting the mains of food. On this occasion, we confirmed that this specimen has a natural coloration, resulting from the phenomenon of partial albinism (leucism) (Figure 2).

DISCUSSION

After a review of the data published in the literature, it appears that only one mention of albinism in the House bunting was reported in Morocco, in 2012 (MaghrebOrnitho, 2014), but, No case has mentioned it before in the whole of Algeria.

The case we report here (leucism) has already been reported recently in other

species of passerines as the case of Hybrid sparrows (*Passer domesticus* X *Passer hispaniolensis*) (Chedad et al., 2021b), the White-crowned Wheatear (*Oenanthe leucopyga*) (Chedad et al., 2019).

This phenomenon of albinism can be explained by different mechanisms, particularly progressive aging, nutritional alterations, and hereditary mutation (Van Grouw, 2013). Another explanation has reported that the phenomenon of albinism, resulting from the action of light rays, where has been noted in some bird species such as the White-throated dipper (*Cinclus cinclus*), the Carrion crow (*Corvus corone*), and the Common blackbird (*Turdus merula*) (Delmotte and Doucet, 1981).

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CONFLICTS OF INTEREST

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

AUTHORS CONTRIBUTION:

Authors' contributions AC and BB conceived the study. AC and BB conducted fieldwork and collected data. AC, and DB analyzed data. AC, DB, and OG wrote the original manuscript. AC, DB, OG and BB revised the final article. All authors read and approved the final paper.

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