

# FIRST ABERRANT COLOURED *CALONECTRIS* SHEARWATER RECORDED IN MADEIRA, PORTUGAL

PEDRO NASCIMENTO\*, EMANUEL SANTOS, JOÃO GONÇALVES, & MAYUNG TEIXEIRA

*On Tales – Unipessoal, Limitada, Startup Madeira, EV089, Madeira Tecnopolo, 1.º Andar, 9020-105 Funchal, Portugal*

\*(pedro.nascimento.ontales@gmail.com)

Received 28 February 2024, accepted 13 September 2024

## ABSTRACT

Nascimento, P., Santos, E., Gonçalves, J., & Teixeira, M. (2025). First aberrant coloured *Calonectris* shearwater recorded in Madeira, Portugal. *Marine Ornithology*, 53(1), 115–117. <https://doi.org/10.....>

Herein, we report a *Calonectris* sp. shearwater with aberrant plumage, observed southwest off Madeira Island. The bird had an unusual amount of white feathering, more than has been reported so far for the genus. Both upperparts and underparts were predominantly white. Initially, we thought the bird was a leucistic Cory's Shearwater *C. borealis*, but some characteristics could not be ascertained. Records of such aberrations should be published to provide a more comprehensive understanding of the subject.

**Key words:** anomalous colouration, *Calonectris*, Madeira, seabird, shearwater

## INTRODUCTION

Aberrant colourations such as albinism, leucism, and melanism have been observed in many vertebrate species, including seabirds (Bond & Diamond, 2016; Ducatez & Devore, 2023; Flood & van Grouw, 2015; Frainer et al., 2015; Garrett, 1990; Mancini et al., 2010; van Grouw et al., 2011).

These colour aberrations have a low incidence among seabirds of the genus *Calonectris* (Al-Abbar et al., 2019; Bried et al., 2005; Leopold & Keijl, 2004; Ristow & Witte, 2004). We found only four official records of such aberrations, including cases of “partial albinism,” melanism, and leucism, as well as one case possibly linked to non-genetic factors (see Table 1). In addition, Bried et al. (2005) mention a few other cases (including personal communications) of abnormally coloured *Calonectris* specimens. Leucism was found in 3.5% ( $n = 3,200$ ) of Scopoli's Shearwaters *C. diomedea* studied in Malta, the highest incidence reported so far (Al-Abbar et al., 2019; Bried et al., 2005).

To the best of our knowledge, the most recent report of an abnormally coloured *Calonectris* shearwater was in November

2019, from São Miguel, Azores. The bird in that report had a significantly lower proportion of depigmented feathers compared to the individual we describe here (Al-Abbar et al., 2019).

## SPECIMEN DESCRIPTION

The aberrant individual was observed during a whale-watching tour aboard the *M/V Miranda* (On Tales – Unipessoal, Limitada), one-third of a nautical mile off Calheta, Madeira Island, Portugal. The bird was among a scattered group of approximately 15 Cory's Shearwaters *C. borealis* at about 18h00 on 14 November 2023.

The bird was typical in size and structure for a Cory's Shearwater. Its bare parts were normal: the eyes were dark, and the bill was yellowish with a blurred dark tip. The legs were obscured. The bird's upperparts (Fig. 1) were predominantly white, with irregular gray-brown patches concentrated primarily on the upper-tail coverts, mantle, scapulars, and wings. The head and nape were mottled, exhibiting a light gray-brownish to white pattern. The tail was entirely dark. The underparts (Fig. 2) were almost entirely white, with dark patches on the remiges and underwing coverts.

**TABLE 1**  
Published data about colour abnormalities within the genus *Calonectris*

Summarised description	Reference by year
Two specimens of Cory's Shearwater <i>C. diomedea</i> <sup>a</sup> found in a breeding colony near Crete were diagnosed with “partial albinism”: one male breeder and a two month-old juvenile female	Ristow & Witte (2004)
Reported the first two observations of melanistic Cory's Shearwaters <i>C. diomedea</i> <sup>a</sup> : one fledging from the Azores (Faial) and another from the Canary Islands (Gran Canaria)	Bried et al. (2005)
Third case of an aberrantly coloured Cory's Shearwater <i>C. diomedea</i> <sup>a</sup> recorded in Greece, possibly non-genetic related	Nikolov et al. (2011)
One leucistic individual of Cory's Shearwater <i>C. borealis</i> recorded off São Miguel Island, Azores	Al-Abbar et al. (2019)

<sup>a</sup> does not consider that Scopoli's Shearwater *C. diomedea* and Cory's Shearwater *C. borealis* are separate species (due to taxonomic split)

## DISCUSSION

To the best of our knowledge, the bird documented herein had the most extensive white feathering of any *Calonectris* shearwater reported to date (see Table 1). No similar cases have been reported in the Madeira Archipelago.

November coincides with the migration season of the difficult-to-distinguish Scopoli's and Cory's shearwaters, making it impossible to identify the aberrantly colored bird to species. This is because the underwing pattern—considered the most reliable field characteristic for distinguishing between the two species (Flood & Fisher, 2020; Flood & Gutiérrez, 2021)—was obscured by the observed colour anomaly, preventing assessment of this key feature.

We could not definitively determine the type of plumage aberration, but we were able to rule out some possibilities. It was not albinism, as the individual did not have completely white plumage or a total absence of melanin, and there was no depigmentation in the bare parts (van Grouw et al., 2011). Based on van Grouw (2006), van Grouw et al. (2011), and van Grouw (2013), the aberration was not leucism, as the loss of pigment was not symmetrical; for example, the primaries on the left wing were much more pigmented than those on the right. While progressive graying could explain the

anomaly, we could not confirm this either. Therefore, we could not assume this case was a straightforward heritable aberration.

## ACKNOWLEDGEMENTS

We would like to thank the reviewers for their valuable insights. We would also like to thank Hein van Grouw for his expertise and help.

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**Fig. 1.** Photographs of a *Calonectris* sp. shearwater with aberrant plumage, observed southwest off Calheta, Madeira, Portugal, on 14 November 2023. Photo credit: Pedro Nascimento, On Tales – Unipessoal, Lda



**Fig. 2.** Photographs of a *Calonectris* sp. shearwater with aberrant plumage, observed southwest off Calheta, Madeira, Portugal, on 14 November 2023. Photo credit: Pedro Nascimento, On Tales – Unipessoal, Lda

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