

WILD HYBRIDIZATION BETWEEN WHITE-FACED (*Dendrocygna viduata*) AND FULVOUS (*D. bicolor*) WHISTLING DUCKS

Fabio Schunck^{1*} , Marcelo Bokermann²  & Werner C.A. Bokermann^{3†} 

¹Independent Researcher. Av. Eugênio Bartolomai, 386, São Paulo, SP, 04785-040, Brazil

²Reserva Natural do Sesc Bertioga. Avenida Francisco Soto Barreiro Filho 1117, Bertioga, SP, 11251-530, Brazil

³Parque Zoológico de São Paulo, Av. Miguel Estéfano, 4241, São Paulo, SP, 04301-905, Brazil

†Deceased

*fabio_schunck@yahoo.com.br

ABSTRACT: Wild hybridization between the White-faced Whistling Duck (*Dendrocygna viduata*) and the Fulvous Whistling Duck (*D. bicolor*) has been documented in South Africa, but there are few reports for the Americas. Here, we present seven such records for South America, five in Brazil and two in Argentina. The data show that this biological phenomenon occurs throughout the distribution of these species, but it is rare. The hybrids exhibit a general body pattern like that of the Fulvous Whistling Duck, while details of the head, neck, and wings are more like those of the White-faced Whistling Duck. These records document the occurrence, frequency, and distribution of hybridization among whistling ducks in the Southern Hemisphere, where reports remain scarce.

KEYWORDS: *conservation, field observations, South America, urban reservoirs, whistling ducks*

The phenomenon of interspecific hybridization is well known and well documented among birds, and it is believed that nearly 10% of avian species have hybridized in the wild (Grant & Grant 1992). Hybridization in the order Anseriformes, particularly within the family Anatidae (including ducks and whistling ducks), is frequent; approximately 133 species have hybridized, though most hybrids have occurred in captivity, with few records in the wild (Sick 1997, McCarthy 2006).

The genus *Dendrocygna* comprises eight species (AviList Core Team 2025), seven of which have documented cases of hybridization. Of the 23 described cases of hybridization within the genus, only seven involving four species occurred in the wild; the remaining cases occurred in captivity. Within these rare instances of wild hybridization, the White-faced Whistling Duck (*D. viduata*) and the Fulvous Whistling Duck (*D. bicolor*) have been documented to hybridize (Ottenburghs et al. 2015). These species occur together throughout most of their geographic distri-

butions in much of South America and Africa. The Fulvous Whistling Duck also occurs in southern North America, Central America, and parts of Asia (Winkler et al. 2020).

Documented records of wild hybridization between the White-faced Whistling Duck and the Fulvous Whistling Duck are scarce; they include two from South Africa and one from Brazil. The first South African record is from 1972 near Johannesburg (Clark 1974) and the second, involving two detections, from 2012 in the Western Cape (Harebottle & Vanderwalt 2014). Despite both species having overlapping distributions in Brazil, there is only one published record of two cases of wild hybridization recorded in 1989 in the south of the country (Santa Vitória do Palmar, state of Rio Grande do Sul; 33°00'S, 52°50'W, 11 m), involving birds captured during a banding program (Nascimento et al. 1990).

In this article, we provide documented evidence of two records of wild hybridization between the Whi-

te-faced Whistling Duck and the Fulvous Whistling Duck in the city of São Paulo, state of São Paulo, Brazil. We also synthesize and evaluate images of hybrids available on the online bird observation and photography platforms WikiAves – Brazil (<https://www.wikiaves.com.br/>) and eBird/Macaulay – USA (<https://www.macaulaylibrary.org/>).

The first record was made by WCAB at the lake inside the Parque Zoológico de São Paulo (23°39'S, 46°37'W, 780 m) during working hours. On 25 August 1969, CAB observed a hybrid individual and photographed it along a group of free-living White-faced Whistling Ducks (Fig. 1). Twenty-six days later, on 20 September 1969, the same individual was collected, although the whereabouts of this specimen

are unknown (Fig. 1). The individual presented a uniform brown body coloration, similar to that of the Fulvous Whistling Duck, but with a white cheek, reddish-brown chest, streaked flanks, and black beak, nape, and posterior part of the neck, typical of the White-faced Whistling Duck (Fig. 1). We ruled out the possibility of it being a bird bred in captivity, since in that case the images would have been taken either with the bird in hand or with some kind of annotation, as in other cases documented by the same researcher. In the present case, the author annotated the image frame with 'White-faced Whistling Duck x Fulvous Whistling Duck' and 'hybrid'. The images were taken with an analog camera on 35 mm positive film (slides showing age-related damage) and show how WCAB was already using photography as a research tool in



Figure 1. Hybrid individual photographed in the wild and subsequently collected at the Parque Zoológico de São Paulo, city of São Paulo, Brazil, in August and September 1969, respectively. A) The hybrid individual is the second from the left in the group of White-faced Whistling Ducks (*Dendrocygna viduata*). B) Lateral and ventral views. C) Legs and flanks. D) Legs and uropygium. E) Upper part of the head, nape, and posterior part of the neck. F) Lower part of the head. Photographs: Bokermann WCA.

the 1960s. The original images are deposited in the library of the Museu de Zoologia da Universidade de São Paulo.

The second record was made in 2022 by FS at the Guarapiranga reservoir, in the southern region of the city of São Paulo (23°45'S, 46°43'W, 735 m), during monthly onboard monitoring of aquatic and migratory birds carried out voluntarily since May 2016. On 26 November 2022, during count number 100 (at approximately 10 AM), a hybrid individual was observed and photographed near a group of approximately 21 White-faced and 100 Fulvous Whistling Ducks in an isolated rural area of the Guarapiranga reservoir called 'Braço do Ribeirão Caulim'. The individual was resting out of the water but became alert with the

approach of the boat, flying away immediately afterwards and demonstrating the wary behavior typical of a free-ranging wild bird (Fig. 2). The individual had a uniform brown coloration on its body and head, with wing and side body patterns more similar to the Fulvous Whistling Duck, but with a white cheek and side of the neck; a black beak, nape, back of the neck, and wing feathers; and reddish-brown wing coverts, similar to the White-faced Whistling Duck (Fig. 2). The individual did not vocalize during flight and landed about 300 m away together with another group of White-faced and Fulvous Whistling Ducks.

Consulting the hybrid species pages (for records of hybrids between White-faced Whistling Duck and Fulvous Whistling Duck) of the two main online



Figure 2. Hybrid individual documented in the Guarapiranga reservoir, south of the city of São Paulo, Brazil, November 2022. A) Group of White-faced Whistling Ducks (*Dendrocygna viduata*) and Fulvous Whistling Ducks (*D. bicolor*) near the hybrid individual. B & C) Hybrid individual out of the water. D & E) Hybrid individual in flight. Photographs: Schunck F.

Table 1. Records of hybrids between the White-faced Whistling Duck (*Dendrocygna viduata*) and the Fulvous Whistling Duck (*D. bicolor*) available on the birdwatching platforms eBird/Macaulay Library (ML) and WikiAves Brasil (WA). The abbreviations ML and WA refer to records with documentation on their respective platforms, while the abbreviation S refers to a list with one undocumented record.

Image number	Locality	Date	Author
ML210219891	Reserva Ecológica Costanera Sur, Ciudad Autónoma de Buenos Aires, Argentina	18 February 2020	Diego Bastías
ML641694873	Laguna Gualeguay, Entre Ríos, Argentina	09 January 2025	Lucas Villafañe
WA212951	Curitiba, Paraná, Brazil	28 September 2010	Marcelo Bonat
WA2462642	Mostardas, Rio Grande do Sul, Brazil	20 December 2016	Geraldo Apratto Gonçalves
S157592008	São Pedro, São Paulo, Brazil	31 December 2023	Paulo Guimaraes

birdwatching platforms, eBird/Macaulay Library (https://search.macaulaylibrary.org/catalog?taxonCode=x00938&mediaType=photo&sort=rating_rank_desc; 56 records) and WikiAves Brasil (<https://www.wikiaves.com.br/midias.php?tm=f&t=s&s=90001>; 2 records), up to 8 October 2025, revealed five records of hybrids that we consider to be wild, as they were not classified by the authors as captive birds and were seemingly in natural environments (Table 1). Among these five records, four have photographic documentation, and one contains only descriptive data. Two records were made in Argentina, southern South America (2020 and 2025), and three in Brazil, in the South (Paraná and Rio Grande do Sul) and Southeast (São Paulo) regions in 2010, 2016, and 2023, respectively. The photographed birds present morphological characteristics similar to those herein reported in the city of São Paulo, having the general brown pattern of the Fulvous Whistling Duck, but with the white frontal part of the head and neck closer to the White-faced Whistling Duck (Table 1).

Available records of hybrids between White-faced and Fulvous Whistling Ducks are very scarce in comparison to the sheer number of records available for these two species, but they suffice to show that this phenomenon occurs in both South America and Africa. For example, the Guarapiranga reservoir record occurred during just one out of 131 field trips, providing further evidence of the rarity of hybridization between these two species.

The pooled records reveal a general pattern (mainly in body coloration) most similar to the Fulvous Whistling Duck, with more subtle characteristics of the White-faced Whistling Duck, such as white coloration on the head and neck, reddish-brown on parts

of the body, striations on the flanks, and black on the nape and back of the neck. However, each individual displays a unique pattern. The hybrids described for South Africa by Clark (1974) and Harebottle & Vanderwalt (2014) are also similar to those found in the city of São Paulo and online platforms.

There are many flooded areas in the city of São Paulo, and the natural occurrence of ducks of the genus *Dendrocygna*, especially the Fulvous and White-faced Whistling Ducks, has been documented since 1916; they are common and numerous birds in the region (Pinto 1938, Bokermann 1985, São Paulo 2024).

The dissemination of field data obtained in the city of São Paulo and the compilation made using online bird observation platforms are in line with the recommendation made by Harebottle & Vanderwalt (2014) to report cases of hybrids in wild populations of Anatidae. These records are vital for better documenting the occurrence, frequency, and distribution of these hybridizations in the Southern Hemisphere, where reports remain scarce, especially among whistling ducks.

ACKNOWLEDGEMENTS

We thank the Marina Sailing Center, especially Romeu (*in memoriam*) and Fernando Bonini, as well as all the employees, for their support of this research; Dione Seripierri and the library team at the Museu de Zoologia da USP; the Bokermann family for providing the photographic material; Jente Ottenburghs for his help with information on the Avian Hybrids platform; and Lucia Montesana, an associate editor and an anonymous reviewer for their important review of the manuscript.

REFERENCES

- AviList Core Team (2025) AviList: The Global Avian Checklist, v. 2025. <https://doi.org/10.2173/avilist.v2025>
- Bokermann W (1985) Anilhamento de irerês (*Dendrocygna viduata*) no Zoo de São Paulo. 1º Encontro Nacional de Anilhadores de Aves. Universidade Federal de Viçosa, MG. Pp 68
- Clark A (1974) Hybrid *Dendrocygna viduata* x *Dendrocygna bicolor*. *Ostrich* 45:255
- Grant PR & Grant BR (1992) Hybridization of bird species. *Science* 256(5054):193-197. <https://doi.org/10.1126/science.256.5054.193>
- Harebottle D & Vanderwalt B (2014) Hybridisation between White-faced and Fulvous Ducks in the wild: further evidence from South America. *Ornithological Observations* 5:17-21
- McCarthy EM (2006) *Handbook of Avian Hybrids of the World*. Oxford University Press, New York
- Ottenburghs J, Ydenberg RC, van Hoof P, Van Wieren SE & Prins HHT (2015) Hybrids between species are shaded in dark grey, while hybrids between subspecies are shaded in light grey. A distinction is made between hybridization in Nature and Captivity. [URL: <https://avianhybrids.wordpress.com/wp-content/uploads/2019/06/genus-dendrocygna.pdf>]
- Pinto OMO (1938) Catálogo das aves do Brasil e lista dos exemplares que as representam no Museu Paulista. 1a Parte. São Paulo. Secretaria da Agricultura. Departamento de Zoologia
- São Paulo (município) (2024) Inventário da fauna silvestre do Município de São Paulo. Dados atualizados até 11 dez. 2023. Secretaria do Verde e do Meio Ambiente, Divisão da Fauna Silvestre. São Paulo. [URL: <https://prefeitura.sp.gov.br/web/meio-ambiente/w/secretaria-do-verde-e-do-meio-ambiente-publica-invent%C3%A1rio-da-fauna-silvestre-2024>]
- Sick H (1997) *Ornitologia brasileira*. Nova Fronteira, Rio de Janeiro. Pp. 912
- Winkler DW, Billerman SM & Lovette IJ (2020) Ducks, Geese, and Waterfowl (*Anatidae*), version 1.0. In: Billerman SM, Keeney BK, Rodewald PG & Schulenberg TS (eds) *Birds of the World*, Cornell Lab of Ornithology, Ithaca. <https://doi.org/10.2173/bow.anatid1.01>
- Nascimento JLX, Scherer SB & Borsato ES (1990) Encontro de híbridos de *Dendrocygna viduata* e *Dendrocygna bicolor* em Santa Vitoria do Palmar. Pp.78-79. Anais do VI Encontro Nacional de Anilhadores de Aves – ENAV