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Short Communication

First Record of Colour Aberration in Common Woodshrike (*Tephrodornis pondicerianus)* from Aravalli Hills, Central Rajasthan, India

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Abstract

Colour aberrations in birds are rare phenomena that provide insight into genetic, environmental, and physiological variations within species. This report documents a first observed case of possible brown aberration in the Common Woodshrike (Tephrodornis pondicerianus), a species typically characterized by ashy-gray and darker plumage. Brown aberration, a form of pigmentation abnormality resulting in diluted eumelanin, causes the normally dark plumage to appear warmer or lighter in tone. This note provides visual documentation, contextualizes the observation within known literature, and discusses its possible causes and implications.

Keywords: Colour aberration; brown morph; plumage variation; melanin dilution; leucism; Colour anomaly.

Introduction

Plumage colour in birds is largely determined by melanin pigments; eumelanin and pheomelanin, which influence the intensity of feather coloration[1]. Aberrations in pigmentation can result from genetic mutations, dietary influences, or health conditions[2]. Among these, brown aberration is a relatively rare but documented form[3], characterized by a reduction in eumelanin deposition, causing black or gray feathers to appear chocolate brown.

The Common Woodshrike (*Tephrodornis pondicerianus*) is a small passerine bird widespread in the Indian subcontinent, typically displaying dull gray-brown upperparts with darker streaking and paler underparts[4]. This note presents the first known field documentation of a brown-aberrant individual within this species, observed in its natural habitat.

Materials and Methods

On June 29; 2025, a Common Woodshrike with distinctive pale plumage was sighted at the base of Aravalli hills (26°33'24.8"N 74°35'57.8"E; elevation 506m above sea level) in Ajmer district of Rajasthan, India. The local ecological landscape is a rocky habitat with dense and extensive *Neltuma juliflora*, an invasive species to this region followed by *Acacia spp* trees, the landscape comprises of dry deciduous woodland region[5]. The area is known for its rich avifaunal diversity and provides suitable habitat for woodland species[6], includes open canopy trees, bushy undergrowth and sparse grasslands. The Common Woodshrike was loudly calling when first sighted.

The field observations were taken using Olympus 10x50 binocular and photographs were taken Nikon P1000 camera. The species' descriptive field identification remarks were noted[4].

Result and Discussion

This is the first documentation of Common Woodshrike with aberrant white feathers (Figure-1). The bird showed distinctive features of Common Woodshrike, including the strongly hooked bill. Unlike the typical grayish-brown upperparts, black facial mask, white rump, and gray tail with white outer tail feathers plumage of the Common Woodshrike, this individual exhibited a warmer, uniformly brownish tone, particularly noticeable on the crown, mantle, and wing coverts. The eye stripe and lores, typically blackish or dark gray, appeared diluted and rusty-brown. There were no signs of feather damage, feather loss, or moulting, and the bird exhibited normal behavior and interaction with conspecifics. The eyes were normal coloured. A detailed literature survey for the possible aberration types was carried out (Table-1) to rule out the possibilities of other colour aberrations. The other colouranamolies were declined on the basis of likelihood and brown aberration was accepted.

There are no previous reports of colour aberration in Common Woodshrike (*Tephrodornis pondicerianus).* The observed plumage characteristics strongly suggest a case of brown aberration, rather than other forms such as leucism or albinism. Leucism generally results in white or patchy plumage due to the absence of all pigment types[7], while brown aberration is specifically linked to reduced eumelanin, giving feathers a faded

brown tone. This kind of aberration may stem from a recessive genetic mutation affecting melanin synthesis pathways, particularly the tyrosinase enzyme involved in eumelanin production[8]. While this condition does not appear to impact the bird's survival or behavior directly, it may influence social dynamics, mate selection, or camouflage efficiency[9]. Reports of brown aberration are uncommon, especially in non-migratory or under-studied species such as *T. pondicerianus*. Several studies have reported colour aberrations in various species form this region[10-13]. This observation contributes to the sparse database of naturally occurring pigmentation anomalies in passerines and highlights the importance of continued field documentation.

Table-1: Comparative Summary of colour aberrations adapted from Mahabal et al.[9] & Van Grouw[3].

Possible Aberration	Appearance	Notes	Likelihood of this aberration in observed individual
Albinism	Completely white plumage; pink (unpigmented) eyes, legs and bill	Brown appearance instead white, and no colour loss in eyes.	Declined
Leucism	Partial or patchy loss of all pigments: white, pale or patchy light areas on an otherwise normal-colored bird; normal eye color	Uniform dilution in observed individual	Declined
Melanism	Excessive dark (black or very dark brown) plumage overall or in patches	No gain of dark colour in recorded individual.	Declined
Ino	Ruddy, pinkish or pale buff replaces normal black or dark pigment; eyes often red or pinkish ("red-eye" mutation)	Pale buff replaces acual colours in observed individual but no red/pinkish eye.	Declined
Progressive Graying	Feathers gradually turn pale gray or white as the bird ages	Pigmentation loss is uniform all over body.	Declined
Brown	Uniformly muted brown where black should be overall "washed-out" look e.g., bird appears chocolate brown.	Black and gray parts turned to brown in observed individual.	Accepted

Figure-1: Common Woodshrike with brown aberration.

Conclusion

This is the first documented case of brown aberration in the Common Woodshrike (*Tephrodornis pondicerianus*). The bird showed typical species traits but with unusually warm brown plumage, likely due to reduced eumelanin. Such cases are rare and offer valuable insight into plumage variation and underlying genetic factors in wild bird populations.

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