

A record on colour aberration in Fulvous-breasted Woodpecker in, Himachal Pradesh, India

Plumage coloration in birds is the result of the deposition of a combination of pigments in the feathers. The most common pigments are melanins that give rise to black and brown colours (Mcgraw 2006). Two types of melanin have been described in birds: eumelanin (black) and phaeomelanin (brown) (Mcgraw 2006). Plumage aberrations are not uncommon in wild birds (Hosner & Lebbin 2006). Several types of colour aberrations of plumage or bare parts of the body have been described in wild living birds. Albinism, leucism, “brown”, and “diluted” mutations are the most frequently reported (van Grouw 2013; Mahabal et al. 2016). Albinism is defined as a total lack of both melanins (eumelanin and phaeomelanin) in feathers, eyes, and skin as a result of an inherited absence of tyrosinase. Leucism is a partial or total lack of eumelanin and phaeomelanin in the feathers as a result



of an inherited disorder of the deposition of these pigments in the feathers. Leucistic birds always have normal coloured eyes. In the “brown” aberration, an inherited incomplete oxidation of eumelanin causes black feathers to turn dark brown.

In the case of dilution, the pigment itself is not changed, but a reduction in pigment concentration,

or “diluted” colour (called “pastel” if both melanins are affected or “isabelism” if only eumelanin is affected) is observed compared to the original colouration (van Grouw 2013; Mahabal et al. 2016). In this note reported on dilution in Fulvous-breasted Woodpecker *Dendrocopos macei* in Hamirpur (31. 686N & 76. 521E), in Himachal Pradesh, India. It is situated in the Shivalik Hills of Himalaya.



Dilution in a male Fulvous-breasted Woodpecker observed on 18 July 2020.

Two individuals of abnormal colour plumage variant birds were observed on 18 and 25 July 2020 from human-dominated areas of Hamirpur. The bird was completely white in colour and red tinges on the head with normal coloured eyes, hence the most likely aberration could be “dilution”. Photographs were taken for further identification. Dilution is defined as a quantitative reduction of melanins. In

this mutation, the amount of pigment is reduced (Kopf 1986; van Grouw 2013; Mahabal et al. 2016). The pigment itself is not changed but due to a reduction in pigment concentration, a ‘diluted’ colour is observed compared with the original coloration. Further the birds were identified as a male Fulvous-breasted Woodpecker based on the field guide (Grimmett et al. 2016). Fulvous-breasted Woodpecker is a medium-

sized woodpecker with stained yellowish-brown underparts. Note white barring on the back and thin stripes down the neck and chest. Male has an all-red crown, female an all-black one (Grimmett et al. 2016).

In India a total of 180 records of colour aberrations were reported in 72 different Indian bird species over a period of 129 years have been reviewed by Mahabal et al (2016). In that review there is no report on Woodpecker’s colour aberration. On the other hand Khacher (1989) reported that colour aberration in Golden-backed Woodpecker (*Dinopium benghalense*) in Ahmedabad, Gujarat and he added that apart from the light golden colour the entire body was white with light creamy tint and he strongly stated that it was not albino. In this regard this is a first known case of dilution in Fulvous-breasted Woodpecker in India. Alaja & Mikkola (1997) and Forrest & Naveen (2000) stated that in certain cases, birds with plumage aberrations reproduced successfully and survived several years in

the wild. Colour aberration individuals have lower survival rates than normally colored individuals, because they are more easily detected by predators (Owen & Shimmings 1992). In conclusion, researchers must be encouraged to report the records of all type of colour aberration in wildlife in order to better understand this phenomenon (Samson et al. 2016).

References

- BirdLife International (2020).** Species factsheet: *Dendrocopos macei*. Downloaded from <http://www.birdlife.org> on 14 November 2020.
- Forrest, S.C. & R. Naveen (2000).** Prevalence of Leucism in Pygocelid Penguins of the Antarctic Peninsula. *Waterbirds* 23(2): 283–285.
- Grimmett, R., C. Inskipp & T. Inskipp (2016).** *Birds of the Indian Subcontinent*. Bloomsbury Publishing India Pvt Ltd, New Delhi, 528pp.
- Hosner, P.A. & D.J. Lebbin (2006).** Observations of Plumage Pigment Aberrations of Birds in Ecuador, Including Ramphastidae. *Boletín de la Sociedad Antioqueña de Ornitología* 16: 30–43.
- Khacher, L. (1989).** An interesting colour phase of the Lesser Golden-backed Woodpecker (*Dinopium benghalense*). *Journal of the Bombay Natural History Society* 86: 97.
- Kopf, F.H.M. (1986).** Het kweken van kanaries. Best. Lubnow, E 1963. Melanine bei Vögeln und Säugetieren. *Journal of Ornithology* 104: 69–81.
- Mahabal, A., H. van Grouw, R.M. Sharma & S. Thakur (2016).** How Common is Albinism Really? Colour Aberrations in Indian Birds Reviewed. *Dutch Birding* 38: 301–309.
- Mcgraw, K.J. (2006).** Mechanics of carotenoid-based coloration, pp. 177–242. In Hill, G.E. & K.J. McGraw (eds), *Bird Coloration - Volume 1: Mechanisms and Measurements*, Harvard University Press, Cambridge, Massachusetts, USA.
- Owen, M. & P. Shimmings (1992).** The occurrence and performance of leucistic Barnacle Geese, *Branta leucopsis*. *Ibis* 134(1): 22–26.
- Samson, A., B. Ramakrishnan, A. Veeramani, S. Karthick, P.S. Kumar, M. Ilakkia, A. Chitheena, J.B. Bah & P. Ravi (2016).** An observation on melanistic form of Indian Blue Rock Pigeon (*Columba livia*) in Udhagamandalam, Nilgiris, *Zoo's Print* 31(3): 3.
- van Grouw, H. (2013).** What colour is that bird? The causes and recognition of common colour aberrations in birds. *British Birds* 106: 17–29.

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