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**SHORT NOTE**

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**ERYTHRISM IN HOUSE SPARROW (*PASSER DOMESTICUS*):  
A RECORD FROM RAJASTHAN, INDIA**

Plumage colouration helps birds in various behavioural and physiological processes (Hill et al. 1999, Senar 2006 & Barragán-Farías et al. 2019). Sometimes, unusual plumage colourations are caused by an abnormal distribution of pigments (Van Grouw 2013). The major reasons for such unusual plumages can be changes in the microstructure of feathers (Laczi et al. 2019), environmental factors (Dorst 1971, Zbyryt et al. 2020), dietary factors (Gonçalves Jr. et al. 2008), chemical changes in pigments and genetic mutations (Venizelos and Benetti 1999 & Mills and Patterson 2009).

The House Sparrow (*Passer domesticus*) is one of the bird species that are commonly found in most places of the world (Ali & Ripley 2001) and Various kind of unusual plumages and colourations are described in house sparrows (Van Grouw 2012). Plant materials like grains, fruit, seeds etc., forms the major portion of House Sparrow's diet and rest consist of animal matter like worms and insects (Gavett and Wakeley 1986 & Fitzwater 1994).

On 20th March 2023, we observed a female House Sparrow with erythristic plumage (Figure 1) feeding in a group under *Lantana camara* an invasive plant in Ajmer, Rajasthan, India (26°30'32.0"N 74°40'59.0"E). The observed individual showed reddish colouration (erythrism) on coverts and flank regions. The bird was seen repeatedly feeding and roosting on *Lantana camara* is native to tropical America (Holm et al. 1977) and is described as one of the worst alien species (Cronk & Fuller 1995). Its berries attract frugivorous birds and mammals that help to disperse its seeds widely (Day et al. 2003). Bright orange, yellow and red colours in bird plumages are mostly because of carotenoids (Brush 1981, Stradi 1998, McGraw 2006) and carotenoids can only be absorbed by the feather cells during feather growth, birds are able to store an excess of them in their livers where they are readily available for colouration of their feathers whenever required (Van Grouw 2012). Erythrism is usually defined as an unusually increased amount of red pigmentation (carotenoids) on an animal's body surface. Cases of erythrism are reported in many species associated with invasive plant species



Figure 1: Erythrisms in House Sparrow (*Passer domesticus*) observed at Ajmer, Rajasthan, India

(Mulvihill et al. 1992, Hudon et al. 2013, Hudon and Mulvihill 2017).  $\beta$ -Carotene gives the red colour to berries and flowers of *Lantana camara* (Zutshi and Madiyappa 2020). According to Van Grouw (2012), carotenoids are responsible for pale yellow to scarlet red colour in birds and are acquired from food sources. This record described here is the first on erythrisms found in House Sparrows in India.

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