

## Sighting of Black-headed Ibis *Threskiornis melanocephalus* with red patch on lower hind neck from Vadodara district of Gujarat, India

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Photos: Anika Tere

Photo 1: An adult with red patch on hind neck feeding in a pond surrounding nesting site.

### Introduction

Colourful plumage plays a vital role in the bird's life cycle, such as species recognition, predator escape and camouflage (Savalli 1995; McQueen *et al.* 2019). Many species of Ciconiiformes, including ibises, egrets, and herons show both plumage and bare part colour changes during the breeding season (McVaugh 1972; Rodgers 1980). Plumage colour acts as a signal for health quality and mate choice (Hill & McGraw 2006; Cuthill *et al.* 2017). Females of some species often choose males with bright colours over duller males (Blount *et al.* 2003). Rapidly changing integument or bare part colours signal readiness to breed, especially in birds nesting colonially or asynchronously (Baltz & Clark 1996).

Colour changes during breeding season are recorded in the Black-headed Ibis, also known as Oriental White Ibis (*Threskiornis melanocephalus*). It has white body, unfeathered black head and neck with a black curved long beak. During breeding season, a blood-red flushing on the flanks, underwing, legs and feet is reported for a brief period at the

onset of breeding (Hancock *et al.* 1992; Matheu & Del Hoyo, 1992). Black-headed Ibis is a residential species of Indian subcontinents (Ali & Ripley 1978). It inhabits fresh water, seawater wetlands, and garbage dumping sites (Hancock *et al.* 1992; Sundar 2006; Koli *et al.* 2013). It is a protected species under Wildlife Protection Act, 1972. Its population is declining due to habitat loss and degradation, hunting and predation, and so it is categorised as a "Near Threatened" species according to the IUCN Red List (Nanda 2006; BirdLife International 2023).

The occurrence of breeding plumage with a red patch on the lower hind neck of Black-headed Ibis is a rare phenomenon. There are only a few published records of its sighting. Kannan *et al.* (2010) sighted a bird with red patch among the 200 nesting birds at the colony at Nelapattu Bird Sanctuary, Nellore district, Andhra Pradesh. On inquiry he found that similar red coloration on the hind neck was also observed by A. Rajaram in July 2003 in the Ranganathittu Bird Sanctuary, Karnataka. On examining the old photographs of the same species B. R. Sykes found images of two separate birds with

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red patches at different localities viz. Bharatpur on 21 August 2005 and Basai, Gurgaon on 21 March 2010 (Kannan *et al.* 2010). After Kannan *et al.* (2010), Guptha *et al.* (2012) recorded a single bird with red patch on the hind neck for three successive breeding seasons at the same nesting site of Nelapattu Bird Sanctuary. All these records are from Andhra Pradesh, Haryana, Karnataka and Rajasthan. Here, I present similar observation from Vadodara district of Gujarat.

### Study area

The Goriyad village (22° 11' 47.38"N; 73° 05' 12.47"E) is located in Padra Tehsil of Vadodara district in central Gujarat, India. It is 12km southwest to Vadodara city, 5km south to Padra village and 6.5km southeast to Ranu village. It contains semi-arid climate with three distinct seasons viz. summer, monsoon and winter.



Photo 2: Five birds with red patches were spotted on 10.5.22. An adult with red patch on hind neck (center), another with a small red patch (left) and a bird with red dot (behind the centered bird).



Photo 3: Five birds with red patches were spotted on 10.5.22. Fifth bird with small red patch in the form of three dots (top, third from right) and a bird with red spot on leg (between first and second birds from left).

The village has a pond (0.47km perimeter, 0.01 sq. km area) at the edge of a road connecting Padra to Goriyad. The pond is surrounded by tall trees including Neem (*Azadirachta indica*), Banayan (*Ficus benghalensis*) and Babul (*Acacia nilotica*). One of its side is occupied by human habitations. Surrounding the pond are agricultural fields. The site was visited weekly and the observations were taken by binocular during morning between 08:00 and 10:30am. Photographic evidences were collected by Nikon D500 and Sony HX400.

### Observation

A regular bird survey was conducted in Padra tehsil of Vadodara district since 2019. As a part of a heronry survey, Goriyad village was visited on 10 May 2022. A heronry comprising mainly of Cattle Egret (*Bubulcus ibis*) along with few Little Egret (*Egretta garzetta*), Median Egret (*Ardea intermedia*) and Great Egret (*A. alba*) was observed on three *Acacia* trees. The trees were located at the edge of the village pond among the human habitation. A flock of 13 Black-headed Ibises was observed perching on one of the three *Acacia* trees preoccupied by Cattle Egrets with about 20 nests. The Black-headed Ibis had congregated on the tree and were preening but did not initiate building the nests. Five birds in the flock caught my attention as they possessed red patches on their necks. A careful observation revealed that two birds were having large and prominent red patches extending to their lower hind necks, the third bird has small red patch consists of three dots, the fourth one had a small red patch and a fifth bird was having red dot in a flock of nine birds. (Photo 1, 2 & 3). The remaining birds of the group did not have such a red patch. However, many of them had whitish patches on their bills (Photo 4). One ibis was noted with red patch on a leg also (Photo 4).



Photo 4: A few birds in the flock were spotted with whitish dull color at the base of their bills on 10-5.22. Another bird with large red patch on hind neck in the same group (on the left).

The site was revisited on 16 May 2022. The ibises have shifted to another Acacia tree having nests of Cattle Egrets, Median Egrets and Little Egrets. They started building nests. A total of 22 adult birds were observed on the tree, while four birds were feeding in surrounding areas within 500m of nesting trees. Total 8 nest were recorded built in two groups. Four birds were recorded with red color on hind neck in one group of nests. Of these, two birds possessed larger red patches on their necks while two had small red patches (Photo 5). Extending my observation to another group of nesting birds on the same tree revealed two more birds with small red patches. All of them were engaged in nest building activities. Few more nests were added to the existing one when the site was visited on 2 June 2022. A few pair were at the nests involved in nest building, courtship and mating while other birds were feeding in surrounding pond and heaps of organic manures. In one such pair involved in courtship, a male with a small red patch was identified by its body and bill size. Total six individuals were observed with red patches, three with large patches covering the hind neck and other with reduced patches.



Photo 5: The ibises started building the nest when the site was visited on 10-5.22. Three birds with red patches.

## Discussion

The Black-headed Ibis with red patch on lower hind neck is recorded in past from Andhra Pradesh, Rajasthan, Haryana and Karnataka states of India. It is reported for the first time from Gujarat. The previous records include one bird with such a patch in a huge colony, however in the current observation the number of birds with red patch is high *i.e.* six birds among the group of only 26 birds only, with variations in the deposition of red color on hind neck.

Beside Black-headed Ibis, Kanan *et al.* (2010) also describe the occurrence of red patch on hind neck of other species of same genus *viz.* captive female of Madagascar Sacred Ibis

(*T. bernieri*) and Australian White Ibis (*T. molucca*) from Walsrode and Australia respectively. It seems that the developing extra coloration during breeding season is a frequent phenomenon in different species of Ibis, however it is neither displayed by all the individuals of the same colony nor exhibited at all regular nesting sites throughout its breeding range. In the current study, a bird with the red patch was confirmed to be a male. However, it is not known whether such coloration is restricted to one sex only. More observations can improve our understanding about this phenomenon. Citing of birds with red patch during the breeding season might have some significance of conveying signal for readiness for breeding, synchronization in nesting, attracting mate or displaying health conditions etc. Coloration in bare parts is due to the deposition of carotenoid pigments that are obtained in the diet (Fox 1976, Hill; 2010, Amat & Rendon 2017). However, the color of bare parts changes more rapidly than feather and it is under the effect of blood circulation, hormones and nutrition (Heath & Frederick 2006; Negro *et al.* 2006). A detailed study on availability of food making carotenoid rich diet of birds and other factors causing such color development during breeding season is needed to enhance our understanding about the it.

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## Records of Nesting of Indian Pied Myna *Gracupica contra* on silk cotton *Bombax ceiba* tree in Jambuvai, Vadodara

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Photos: Sugandha Pandit

Photo 1: Asian Pied Starling collecting nesting material from garbage

Indian pied myna (*Gracupica contra*) is a residential insectivorous species of Indian Subcontinent (Ali and Ripley 1987, BirdLife International, 2023). Pied Myna breeds from late February to August and huge dome made of materials such as thin twigs, stems, grasses, creepers and even cellophane wrappers, paper pieces, etc., with a cavity in it. The pair mixes with the flock once the breeding ends (Tyagi & Lamba 1984: Kumari et al. 2018).

As a part of a Sarus crane survey, Jambuvai village (22° 20' 08.04N; 73° 19' 12.30E) was visited on 15th May 2021. Jamuvai village is located about 2.25km south of Nimeta, Waghodia tahsil of