

walking the margins of many farm fields, our persistence finally paid off when a single individual rose from some scrub to briefly alight atop a thorny *Acacia*. We made the long trek back to the jeep and with the heat of the day now upon us, our driver suggested we visit a small wetland created by a dam at the edge of the Little Rann where he had regularly seen birds arrive to drink. This seemed like a good idea, so we decided to give it a try...

In fact, there was a fine assortment of wetland species present including a nice selection of waders, gulls and terns, and sure enough, we had seen a succession of birds that included around 25 Red Collared Doves (*Streptopelia tranquebarica*) and 25 Eurasian Collared Doves (*Streptopelia chinensis*) arrive to drink from the stony margins of small grassy islands in the wetland. Whilst scanning one such island, we noticed a group of 3 small grey pigeons (*Columba* sp.) walking around and sunning themselves. Whilst superficially resembling Common Pigeons (*Columba livia*) they appeared smaller, of neater proportions, showed poorly-marked black wingbars, purplish neck-sides and reminded us of Stock Doves (*Columba oenas*) that we are very familiar with in the UK. Knowing that Yellow-eyed Pigeons (*Columba eversmanni*) had been recorded in India, we were quickly viewing them through our telescope and bingo, we could see the rather obvious yellow orbital skin – they really were Yellow-eyed Pigeons – another species that we definitely had not anticipated seeing!

With a quick glance at the species' mapped range in our 'Pocket Guide to the Birds of the Indian Subcontinent' by

Grimmett *et al.* (1999), we knew of the likely importance of the record. Being of the pre-digital camera era, we set about creeping to the closest point from which to attempt to photograph them – we need not have worried as they seemed unconcerned by our approach. In the end, we enjoyed photographing and watching them mainly resting, sunbathing and preening for an hour, when for no apparent reason, they suddenly flew off strongly towards the west. We had my father's telescope camera adapter for just such an occasion and whilst photography was very much a game of chance in those days - as there was no instant reviewing of results - we were pleasantly surprised that on having the slides processed after returning home to the UK, the results supported our identification.

On our return to Camp Zainabad that evening we told the owner of our unexpected sighting of the trip and with a check of the literature he had at hand he thought it represented the first record for Gujarat.

[Yellow-eyed Pigeons were reported from Little Rann of Kachchh in October 2006 when 8 birds were seen by Dr. Schute, a birder from Germany (Malik 2009). This record, from December 2005, with supporting photographic evidence, is the first record of the species for Gujarat – Eds].

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Rare colonial nesting of Black Ibis *Pseudibis papillosa* at Amla, near Vadodara

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Introduction

The Black Ibis (*Pseudibis papillosa*), also known as Indian Black Ibis or Red-naped Ibis, is a resident species of Indian Subcontinent (Ali & Ripley 1987, Grimmett *et al.* 2001, Parasharya *et al.* 2004, Ganpule 2020). It is common in Gujarat state, where its population is considered to be good compared to other states (Mundkur & Taylor 1993). It is a schedule IV species protected under Wildlife Protection Act, 1972 and a 'Least Concern' species according to the IUCN Redlist (Nanda 2006, BirdLife International 2021). It inhabits various habitats, such as wetlands, marshlands, agricultural fields, etc. and unlike other species of ibises, it is not much dependent on water (Ali & Ripley 1987, Chavda 1997, Soni 2008).

Black Ibis usually nest individually, high in tree, from March to November in India (Chavda 1997, Soni 2008, Soni *et al.* 2010, Kumar 2017, Kumar 2019). It is recorded to use old unused nests of birds of prey and crows (Hancock *et al.* 1992). It nests on the trees like Banyan (*Ficus benghalensis*), Peepul (*F. religiosa*), Neem (*Azadirachta indica*), Tamarind (*Tamarindus indica*), palmyra palm (*Borassus flabellifer*), Sheeshum (*Dalbergia* sp.), Nilgiri (*Eucalyptus* sp.) and Khejri (*Prosopis cineraria*) (Baker 1935, Nair & Vyas 2003, Dookia 2004, Soni *et al.* 2010, Sangha 2013, Kumar 2019). However, the species is also reported nesting on electricity transmission and communication pylons (Dodia & Parasharya 1986, Sangha 2013, Mohamed *et al.* 2014). Except for a few records of its nesting, very little detailed scientific work has been done to understand the breeding

Black Ibis....



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ecology of Black Ibis (Ali & Ripley 1983, Hancock *et al.* 1992, Chavda 1997, Soni 2008, Soni *et al.* 2010, Sangha 2013, Kumar 2019).

Study area

Amla village (22° 10' 32.63" N; 73° 04' 27.20" E) is located in Padra Tehsil of Vadodara district in Gujarat state, India. It is about 15 km southwest of Vadodara, 8 km south of Padra and 6 km southeast of Ranu. It has a semi-arid climate, with three distinct seasons *viz.* summer, monsoon and winter. The village has a large pond (1237 m perimeter) at the edge of a road connecting Ranu village to Amla and a small pond (427 m

perimeter) located near human habitation. Surrounding the ponds are agricultural fields.

Methodology

Amla village was visited on 25 April 2021 and 4 May 2021. The trees were identified and given numbers for the convenience of recording observations. The birds and their nests were observed by using binoculars (10X50) between 09:00 hrs and 11:00 hrs by standing 25-50 m away from the trees. The total numbers of nests were counted while standing below the tree. Information such as location of nests, height of nest, activities of birds, presence and numbers of chicks etc. was taken on

data sheets. Photographs were taken by using DSLR Canon 1100D camera with 50-500mm lens and Sony HX400 camera. GPS locations were taken from Sony HX400 camera.

Interactions with the local people were done to get more information about the presence and nesting activities of ibises in the study area.



Vadodara district



Gujarat state



Padra Tehsil

The height of trees and nests was estimated by visual observation and comparison with man-made objects such as home and electricity transmission poles adjacent to the tree. The diameter at breast (DBH) was measured by using a measuring tape. Distances of nesting trees from human habitation, water body and roads as well as the minimum and maximum distance between two adjacent nests were estimated by visual observations.

Observations

Black Ibises were found nesting on three Banyan trees near the small village pond. The large village pond was totally dry and process of digging/deepening this pond was going on. All the Banyan trees were within human habitation, about 25 m from each other and were roughly arranged on the corner of an imaginary triangle. The trees were given numbers according to

Date	No. of Banyan trees	TH (m)	UNH (m)	DBH (inch)	Activity			EN	Total Nests
					IN	WC	NB		
25-4-2021	1	18	17	65.60	06	-	-	01	07
	2	16-18	16-18	49.68	-	02	01	02	05
	3	18	18	36.30	01	-	-	-	1
	Total Nests					07	02	01	03
4-5-2021	1	18	17	65.60	07	00	01	01	09
	2	16-18	16-18	49.68	01	02	-	02	05
	3	18	18	36.30	01	-	-	-	1
	Total Nests					09	02	01	03

TH- tree height, UNH- upper most height of nest, DBH-diameter of tree at breast height, IN-Incubating, WC- With Chicks, NB- Nest Building, EN-Empty Nests

Black Ibis....

the descending order of the nests they contained (Photo 2). Tree 1 and tree 3 were used by the villagers to keep their livestock cattle. The distance of nearest home to tree 1, 2 and 3 were approximately 6 m, 4 m and 24 m respectively (Photo 1 and 2). Tree 2 and 3 were at the edge of a small interior road beside the small pond.

A total of 13 nests were observed on 25 April 2021 (Table 1). The nests were large platforms of sticks, with few leaves. The Banyan tree-1 was about 18 m in height (Photo 1). Total 7 nests were observed on tree 1. All nests were occupied by one adult bird incubating except for one empty nest. Three nests were at the top of the tree. The lowest height of the nest was about 16 m. Banyan tree-2 was about 16-18 m in height. A total of five nests were found on Tree 2 at a height between 16 m and 18 m. There were two chicks in one nest while two chicks with a parent were found in another nest. The chicks were covered with white down and some had black plumage. The third nest, which was located in middle of two nests, was empty at the time of observation. All these nests were at the height of 16 m (Photo 3). Two nests were on the top of the tree, of which one was empty and in another, nesting material was being added by an adult. Banyan tree-3 was also about 18 m in height and contained only one nest at the top of the tree with an adult incubating in it.

Two more nests were seen on Banyan tree 1 and a total of 15 nests were observed when the site was revisited on 4 May 2021. The two empty nests of tree 2 were still unoccupied. One of the empty nests was small in size. The minimum and maximum distance between two adjacent nests was about less than 1 m and 3.5 m respectively.

Discussion

The Black Ibis is known to nest individually on trees or electric and transmission poles. However, they have been recorded nesting in colony of few pairs in the past. A small colony of two pairs nesting on palmyra palms was recorded in ICRISAT campus, Patancheru, Medak district, Andhra Pradesh (Sangha 2013). Baker (1935) recorded 3-5 pairs nesting in the same tree. Hancock *et al.* (1992) recorded colonial nesting of Black Ibis in Nepal Terai with two pairs nesting on the same tree. However, the numbers of nesting pairs recorded in past was less compared to the current study.

For Gujarat, colonial nesting of Black Ibis has been reported earlier; Thakker (2010) reported 21 nests on four Banyan trees at Sanathal Tank, near Ahmedabad, wherein the Black Ibis were using nests built by Painted Storks (*Mycteria leucocephala*). A total of 12 active nests were observed and 12

pairs were recorded nesting colonially at a single site in this study. Total nine nests were observed on a single tree, which might be the highest number of nests recorded in a single tree. Black Ibis make nests and lay eggs within 5-9 days and incubate the eggs for 30-32 days (Kumar 2019). The presence of chicks in two nests at this site suggests that these two pairs of ibises might have started nesting in the beginning of March 2021. Interactions with local people revealed that they nest at this site regularly.

Black Ibis are recorded nesting along with other species such as crows, vultures and Black Kites (*Milvus migrans*) (Ali & Ripley 1983, Soni *et al.* 2010). Nesting of the ibis in a colony with other species was reported by Naik (1989) and Mundkur (1991). Chavda (1997) has observed this ibis nesting on one of the palm species with White-backed Vulture (*Gyps bengalensis*) in Gir Forest, Gujarat. Black Ibis is known to use old deserted nest of crows and birds of prey. Few Jungle Crows (*Corvus macrorhynchos culminatus*) were observed at the nest sites. However, no other species was observed nesting with Black Ibis at the same site during the observations.

A large number of species, including many species of order *Ciconiiformes*, nest colonially (Parasharya & Naik 1990, Hencock *et al.* 1992, Tere 2004, Tere 2009, Gopi & Pandav 2011, Minias 2014, Mohapatra *et al.* 2018, Koju *et al.* 2019). However, colonial nesting of Black Ibis is uncommon. Factors such as food abundance, protection from predators, and scarcity of nesting sites etc. are thought to cause birds to nest colonially (Urfi 2003, Roshnath & Sinu 2017, Brzeziński *et al.* 2018). Nesting within human habitation might be advantageous for the Black Ibis. However, continuous monitoring of the site and a detailed study is required to understand the factors supporting colonial breeding of Black Ibis.

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