

During this time, five birds started courtship display. Of these, two had a pale red iris. The bills were black, the orbital skin bright green, and the tibia pale flesh coloured. The other three birds had a pale orange iris, the orbital skin and bill coloration was as in the other two, but the tibia was bright flesh coloured. Two of the birds with orange irises paired off and started nesting. It was noted that the pale red or pale orange colour of the iris persisted in bright sunlight and in the shade. In earlier observations of 10-30 breeding median egrets, from 1991 to 1996, the iris under bright or diffused sunlight was light orange to bright red in some of the birds. But when in shade (as when the bird ducks to accept nest material from the mate), the iris reverts back to the normal yellow colour.

Change in iris coloration has been recorded for certain egret species elsewhere. Hancock and

Kushlan (1984) mention a brief ruby-red flush of the iris (from yellow) prior to egg-laying in the large egret in Australia and North Africa. They do not mention iris colour change in the median egret, but report it in the little egret *Egretta garzetta* (turns red during the height of courtship) and the grey heron *Ardea cinerea* (changes from deep yellow to deep orange). My observations on the change in iris colouration in the large and median egrets are interesting, as it has not been reported for the median egret, or for *E. garzetta* or *A. cinerea* in India. The significance of the changes in iris coloration, the colour variations under shade and sunlight, and why they do not appear in all individuals of a colony, is yet to be known.

March 27, 1999

V. GURUSWAMI

*Simpson Estate,*

*Chennai 600 001, Tamil Nadu, India.*

#### REFERENCES

- ALI, S. & S.D. RIPLEY (1987): Handbook of the Birds of India and Pakistan. Compact Edition. Oxford University Press, Bombay. Pp.18.
- BROWN, L., E.K. URBAN & K. NEWMAN (1982): The Birds of Africa. Volume I. Academic Press,

London. Pp.178-179.

- HANCOCK, J. & J. KUSHLAN (1984): The Herons Handbook. Croom Helm. London. Pp.288.

- ROBERTS, T.J. (1991): The Birds of Pakistan. Volume I. Oxford University Press, Oxford. Pp.89-92.

### 8. SIGHTING OF THE BLACK STORK *CICONIA NIGRA* AND LESSER ADJUTANT-STORK *LEPTOPTILOS JAVANICUS* AT NAGARHOLE NATIONAL PARK, KARNATAKA

Nagarhole National Park (NP) (643 sq. km), along with the Bandipur Tiger Reserve (875 sq. km) and Mudumalai Wildlife Sanctuary (325 sq. km) to the southeast and the Wynaad Wildlife Sanctuary (350 sq. km) to the southwest, form a part of Nilgiri biosphere, the largest protected forest tract in peninsular India. The bird life in this region is impressive, due to a dense forest cover interspersed with innumerable rivulets that feed the Kabini river. The existing bird list has nearly 270 species (Anon 1987), and during my visit to the National Park between January 12-14, 1999, I sighted 97 bird species.

On the last morning of my stay at the

Kabini River Lodge at Karapur village, located about 8 km to the east of Sunkadakatte Forest Rest House, Nagarhole National Park, I decided to take a jeep ride into the Park. After about 15 minutes from the Bisalvadi waterhole, the jeep reached a rivulet amidst a very dense forest tract. While scanning the banks for waders, I observed two large birds, the lesser adjutant-stork *Leptoptilos javanicus* and black stork *Ciconia nigra*. The scarlet red beak and legs of the *C. nigra* were perfectly illuminated by the sun and the white underparts were unmistakable. I observed the birds for a good 15 minutes before returning to the lodge. On mentioning the



sighting to Mr. Sarath, the chief naturalist, Kabini River Lodge, I gathered that though *L. javanicus* had been occasionally sighted, no one had ever come across a *Ciconia nigra*, in spite of a close vigil by many visiting field biologists and naturalists.

Although the lesser adjutant-stork has been sighted in the Western Ghats on several occasions (Anon 1987, Ali 1969, Baker 1935, Jerdon 1839-1840), its true status and movement within the biogeographic zone is not clear. However, reports of its breeding in Periyar Tiger Reserve have confirmed the existence of a small viable population in south India.

According to Ali and Ripley (1987), *C. nigra* is a winter visitor to west Pakistan, north India from Baluchistan, Sind, North West Frontier Province and Punjab through Nepal (to

c. 900 m alt.) and the Gangetic plain to eastern Assam, south through Rajasthan to about Kutch and northern Gujarat. It is considered to be rare in Deccan, south of c. 18° N. (Sholapur district). However, there are sporadic records of the bird from peninsular India, as can be seen from Table 1.

In the light of the above mentioned records, one can safely conclude that, for reasons not yet clear, there seems to be a distinct southward movement of the bird, which a few decades ago was never known to even stray into these areas. Madsen (1988) speculated that this may be due to the severe drought in the north. However, this southward movement may have been forced upon the species by the loss of precious habitat in Pakistan, West, North and Northeastern India (Khachar 1976, Khacher 1986, Himmatsinhji

TABLE 1  
SIGHT RECORDS OF BLACK STORK IN PENINSULAR INDIA

Name of area	District	State	No. of Storks	Date	Source
Ratapani Wildlife Sanctuary	Bhopal	Madhya Pradesh	NM	6 Mar. 1994	Misra, 1994
Kanha National Park	Mandla	Madhya Pradesh	1	Jan. 1995	Andheria, 1995
Gir Sanctuary	Junagadh	Gujarat	11	NM	Baskaran 1995
Shindovani Lake	Pune	Maharashtra	6	NM	Naik, 1989
Januna Lake	Buldana	Maharashtra	5	Winter 1990	Sawji, 1990
Rollapadu	Kumool	Andhra Pradesh	2	Nov. 1985	Manakadan, 1988
Rollapadu	Kumool	Andhra Pradesh	6	Dec. 1985	Manakadan, 1988
Bolarum	Hyderabad	Andhra Pradesh	1	5 Apr. 1987	Kanniah & Ganesh, 1990
Parambikulam Wildlife Sanctuary	Palakkad	Kerala	1	14 Feb. 1984	cf. Neelkantan <i>et. al.</i> , 1983
Parambikulam Wildlife Sanctuary	Palakkad	Kerala	1	16 Feb. 1986	cf. Neelkantan
Chamravattom	Malappuram	Kerala	1	7 Jan. 1987	cf. Neelkantan <i>et. al.</i> , 1983
Malampuzha reservoir	Palakkad	Kerala	11	16 Feb. 1987	cf. Neelkantan <i>et. al.</i> , 1993
Periyar Tiger Reserve	Idukki	Kerala	1	24 Feb. 1987	cf. Neelkantan <i>et. al.</i> , 1993
Walayar dam	Palakkad	Kerala	7, 8, 14	12, 16, 25, Jan. 1991 resp.	cf. Neelkantan <i>et. al.</i> , 1993
Walayar	Palakkad	Kerala	14	8 Jan. 1994	Praveen, 1997
Near Munnar	Idukki	Kerala	1	4 Feb. 1997	Prasad, 1997
Kaliveli Tank	—	Pondicherry	1	30 Jan. 198 and 5 Feb. 1988	Perennou & Santharam, 1990
Helawe & Bagura plane	Kumana	Sri Lanka	1	20 Mar. 1938	Phillips, 1940
Madangiri Salt Work	Uttar Kannada	Karnataka	3	13 Dec. 1987	Madsen, 1988
Gothhalli Village	Belgaum	Karnataka	2	26 Feb. 1994	Sant, 1994

(NM: Not Mentioned)



1985, Pandey 1989, Buckton and Morris 1990, Sivasubramanian 1992, Barman and Talukdar 1995, Gandhi 1995, Barua *et. al.* 1997), where it is known to exist in greater numbers.

There is also a remote possibility of some individuals straying from their normal course during migration to the Subcontinent from Eastern Europe. However, it would be difficult to ascertain this.

Considering these facts, I sincerely appeal to all field biologists and bird watchers to keep a close watch on the movements of the stork, so that we can make a concerted effort at protecting the new emerging haunts of *Ciconia nigra* in South India. Also, we need to step up our efforts to ascertain the true status of *Leptoptilos javanicus* within the Western Ghats range.

# ACKNOWLEDGEMENTS

I thank Dr. S. Subramanya, University of Agriculture Sciences, Gandhi Krishi Vigyan Kendra Campus, Bangalore, for providing vital references and deliberating on the initial manuscripts. His interest in this article has been inspirational throughout. I also thank Mr. Samba Kumar, Program Officer, Wildlife Conservation Society India Program, Bangalore, for information on various locations in the Park.

July 8, 1999

ANISH P. ANDHERIA

2, Sagar Building, V. P. Road,  
Andheri, Mumbai 400 058,  
Maharashtra, India.

# REFERENCES

- ALI, S. (1969): Birds of Kerala. Oxford University Press, New Delhi.
- ALI, S. & S.D. RIPLEY (1987): Handbook of birds of India and Pakistan. Oxford University Press, Bombay.
- ANDHERIA, A.P. (1995): A checklist of birds of Kanha National Park, 19-21 Jan. 1995. Unpublished.
- ANONYMOUS (1987): A preliminary checklist of birds of Nagarhole and environs. Unpublished. Wildlife Dept., Karapur, Jungle Lodges and Resorts Ltd.
- BAKER, E.C.S. (1935): The nidification of birds of the Indian Empire, 4. London: Taylor & Francis.
- BARMAN, R. & B.K. TALUKDAR (1995): New record of Black Stork *Ciconia nigra* in Deepoor Boel, Assam. *Newsletter for Birdwatchers* 35: 15.
- BARUA, M., G.C. CHETTRI & P. BARDOLOI (1997): Endangered birds sighted in Pobitora Sanctuary. *Newsletter for Birdwatchers* 37: 109.
- BASKARAN, T. (1995): An audio guide to the birds of southern India, and notes on Night herons and Black storks. *Newsletter for Birdwatchers* 35: 50.
- BUCKTON, S. & P. MORRIS (1990): India and Nepal, December 1989 - June 1990. Unpublished.
- GANDHI, S.S. (1995): New and rare sighting of Black stork near Dehra Dun (UP). *Newsletter for Birdwatchers* 35: 97-98.
- HIMMATSINHJI, M.K. (1985): The Black stork in Kutch: old record confirmed. *J Bombay nat. Hist. Soc.* 82: 403.
- JERDON, T.C. (1839-1840): Catalogue of the birds of the peninsula of India, arranged according to the modern system of classification; with brief notes on their habits and geographical distribution, and description of new, doubtful and imperfectly described species. *Madras J. Lit. Sci.* 10: 60-91, 234-269; 11: 1-38, 207-239; 12: 1-15, 193-227.
- KANNIAH, P. & T. GANESH (1990): Occurrence of the Black stork *Ciconia nigra* near Hyderabad. *Mayura* 7 & 8: 46-48.
- KHACHAR, SHIVRAJKUMAR (1976): Occurrence of the Black stork (*Ciconia nigra*) in Saurashtra. *J. Bombay nat. Hist. Soc.* 73: 390-391.
- KHACHER, L. (1986): The White and Black storks. *Newsletter for Birdwatchers* 26(3 & 4): 12-13.
- MADSEN, S.T. (1988): Black storks in Nepal and India. *Oriental Bird Club Bull.* 11: 34-35.
- MANAKADAN, R. (1988): The Black stork *Ciconia nigra* (Linnaeus) in Kurnool District (Andhra Pradesh). *J. Bombay nat. Hist. Soc.* 84: 675-676.
- MISRA, M.K. (1994): Stork watching at Ratapani. *Newsletter for Birdwatchers* 34: 118.
- NAIK, S. (1989). Black Storks (*Ciconia nigra*) near Pune. *Newsletter for Birdwatchers* 29(7 & 8): 1.
- NEELKANTAN K.K., C. SASHIKUMAR & R VENUGOPALAN (1993): A book of Kerala Birds WWF-1, Kerala State Committee. Pp. 11-12.
- PANDEY, S. (1989): Black stork. *Newsletter for Birdwatchers* 29(1 & 2): 9.
- PERENNOU, C. & V. SANTHARAM (1990): Status of some birds in southeastern India. *J. Bombay nat. Hist. Soc.* 87: 306-307.
- PHILLIPS W.W.A. (1940): The occurrence of the Black stork



- (*Ciconia nigra*) in Ceylon. *Ibis* 4(14th series): 333-334.
- PRASAD, A. (1997): Black stork in Kerala. *Newsletter for Birdwatchers* 37: 65.
- PRAVEEN, J. (1997): Storks of Walayar. *Newsletter for Birdwatchers* 37: 9.
- RAMANI, R. (1985): Black storks. *Newsletter for Birdwatchers* 25(3 & 4): 15.
- SANT, N. (1994): Sighting of Black stork near Belgaum. *Newsletter for Birdwatchers* 34(2): 39.
- SAWJI, P.G. (1990): Black storks in Maharashtra. *Newsletter for Birdwatchers* 30(11 & 12): 11.
- SIVASUBRAMANIAN, C. (1992): Indian Skimmer *Rynchops albigollis* Swainson and Black stork *Ciconia nigra* (Linn.) — new additions to the avifauna of Keoladeo National Park, Bharatpur. *J. Bombay nat. Hist. Soc.* 89: 252-253.

## 9. LONG-BILLED VULTURE *GYPs INDICUS INDICUS* NESTING ON TREES IN THE THAR DESERT, RAJASTHAN

(With one plate and one text-figure)

There are two subspecies of longbilled vultures *Gyps indicus* in the Indian subcontinent, differentiated on the basis of their distribution, nesting habits and physical features. The long-billed vulture (*Gyps indicus indicus*) is distributed south of the Gangetic plain, except extreme southwest India and Ceylon. The Himalayan long-billed vulture (*Gyps indicus tenuirostris*) is found in the Gangetic plain north to and along the lower Himalayas through Nepal, Bengal and Assam, where it is very common and in eastern Assam and Bangladesh (Ali and Ripley 1987).

Nest-site selection is the main behavioural difference between the two subspecies. The long-billed vulture nests on ledges of cliffs and hill forts, while the Himalayan long-billed vulture nests on trees in small colonies (Roberts 1991). The breeding season for both ranges from November to end of February, or latest up to March.

The long-billed vulture has been observed nesting on cliffs in many areas of Rajasthan, while the Himalayan long-billed was reported breeding in Ambala district, Haryana (Jones 1916). When I found five nests of the longbilled in Nagaur district, Rajasthan in May 1994 on *Prosopis cineraria* trees, I assumed that they were nests of the Himalayan long-billed vulture, because the species is already reported from Ambala in the adjoining state of Haryana (Jones

1916) and the nests were on trees. I took some photographs and made notes on the bird and nest (Plate 1, Fig. 1).

I came across another nest of the same bird in December, 1997 near Saanchu in Bikaner, Rajasthan (Fig. 1). The nesting bird was paler and the neck of the subadult was covered with whitish down. The neck of the bird guarding the nest was partially covered with down. One was sitting on the same tree and the other on another tree some 15 m away. The feathers on the legs extended well below the knee joints. The bill and cere had a yellow horn-like colour.

The nest was placed on the highest crotch of a *Prosopis cineraria* tree about 8 m from the ground, and was open from all sides. It measured 68 cm x 90 cm and had a depth of 103 cm. The measurement of only one nest was taken, after the juvenile had left it.

The nest materials were twigs of *Capparis decidua*, *Prosopis cineraria*, *Acacia arabica*, *Brassica campestris* stubble from a nearby field and some pieces of cloth. The tree on which the nest was placed was surrounded at its base by *Capparis decidua*, *Prosopis juliflora* and an unidentified thorny bush which grows to 2 m. All the five nests were on *Prosopis cineraria* trees growing in about one sq. km area.

This subspecies was confirmed by John Schmitt, a bird artist from USA, with the help of a photograph of the longbilled vulture on its nest.





Andheria, Anish P. 2001. "Sighting of the Black Stork *Ciconia Nigra* and Lesser Adjutant stork *Leptoptilos Javanicus* At Nagarhole National Park, Karnataka." *The journal of the Bombay Natural History Society* 98, 443–446.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/189534>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/155229>

**Holding Institution**

Smithsonian Libraries and Archives

**Sponsored by**

Biodiversity Heritage Library

**Copyright & Reuse**

Copyright Status: In Copyright. Digitized with the permission of the rights holder

License: <http://creativecommons.org/licenses/by-nc/3.0/>

Rights: <https://www.biodiversitylibrary.org/permissions/>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.