



Short Communication

VULTURES ARE AGAIN IN THE CITY SKY

INTRODUCTION

As many as nine species of vultures are known from the Indian sub-region viz., Red-headed vulture [*Sarcogyps calvus* (Scopoli)], Eurasian vulture [*Gyps fulvus* (Hablizil)], Himalayan Griffon [*Gyps himalayensis* Hume], Long-billed vulture [*Gyps indicus* (Scopoli)], Slender-billed vulture [*Gyps tenuirostris* (G.R.Gray)], Indian White-rumped vulture [*Gyps bengalensis* (Gmelin)], Egyptian vulture [*Neophron percnopterus* (Linnaeus)], Lammergeier [*Gypeatus barbatus* (Linnaeus)], Cinereous vulture [*Aegyptius monachus* (Linnaeus)] (Manakadan & Pittie, 2001). Ali and Ripley (1981) mentioned eight species of Indian vulture of which subspecies *indicus* and *tenuirostris* of *G. indicus* are presently treated as separate species (Manakadan and Pittie 2001). Ali and Ripley (1981) also mentioned that *G. indicus jonesi* was synonymized with *G. fulvus*.

A perusal of IUCN status (2007) for the vulture species, declared five species as threatened, of which *Sarcogyps calvus*, *Gyps indicus*, *Gyps tenuirostris*,

Gyps bengalensis have provided the maximum protection status being declared as Critical (CR), while only *Neophron percnopterus* comes under Endangered (EN) category. Among the rest of the species the status of *Aegyptius monachus* has declared as Near Threatened (NT) and that of other three has assigned as Least Concern (LC). Only three species of *Gyps* have been included in the Schedule I (Part III) of Indian Wildlife (Protection) Act, 1972 (Amended in 2004). It has already been included in CITES Appendix II and CMS Appendix II.

Repeated surveys in 2002-03, have shown that all three *Gyps* spp. have declined by > 97% (by > 99.5% for the Indian White-rumped vulture) throughout their ranges in India, with many areas of the country now devoid of *Gyps* Spp. of vulture (Anon, 2008). In addition to the threat of extinction of vulture species, this dramatic decline presents a whole range of threat to both ecosystem and human health. The absence of such important scavengers will almost certainly influence the numbers and distribution of other scavenging species.

Table 1 : Status of Indian Vultures

Sl. No.	Common English Name	Scientific Names	Status (IUCN) 2007	Status (IWPA) 2004
1.	Red-headed Vulture	<i>Sarcogyps calvus</i> (Scopoli)	CR	NL
2.	Cinereous Vulture	<i>Aegyptius monachus</i> (Linnaeus)	NT	NL
3.	Eurasian Vulture	<i>Gyps fulvus</i> (Hablizl)	LC	NL
4.	Himalayan Griffon	<i>Gyps himalayensis</i> Hume	LC	NL
5.	Long-billed Vulture	<i>Gyps indicus</i> (Scopoli)	CR	Sch. I (Part III)
6.	Slender-billed Vulture	<i>Gyps tenuirostris</i> (G.R.Gray)	CR	Sch. I (Part III)
7.	Indian White-rumped Vulture	<i>Gyps bengalensis</i> (Gmelin)	CR	Sch. I (Part III)
8.	Egyptian Vulture	<i>Neophron percnopterus</i> (Linnaeus)	EN	NL
9.	Lammergeier	<i>Gypeatus barbatus</i> (Linnaeus)	LC	NL

NL–Not Listed

Declining of the population of Indian White-rumped vulture was first noticed at Keoladeo Ghana National Park at Bharatpur, Rajasthan (Prakash 1999). It was reported that about 2000 vultures were there upto 1985 and suddenly by 1998 it was come down to 95 only (Marwah, 2004). The scientists estimated the population of White-rumped vulture throughout its range is only 11,000 from tens of million in 1980s (APF 2008, IUCN 2007).

In 1988 the status of White-rumped vulture was declared as Lower Risk/ least Concern (LR/LC); in 1994 same was again changed as Lower risk/near threatened (LR/NT) and ultimately declared as Critically Endangered (CR) by 2000 (Birdlife International 2001).

Geographical range of White-rumped vulture has been declared as Pakistan, India, Bangladesh, Nepal, Bhutan, Myanmar, Thailand, Laos, Cambodia and southern Vietnam. It has also been recorded from SE Afghanistan and Iran and presently extinct from southern China and Malaysia. The bird was previously abundant throughout its range but disappeared from most of SE Asia in the early 20th century and now only occurs locally. Since 1996, it has suffered a catastrophic population decline (over 95%) in its remaining strongholds in Pakistan and India. It is still common in Shan State (Myanmar) and rare in southern China (Prakash *et al.* 2003 and IUCN 2007).

The White-rumped vulture mostly occurs in plains rather than hilly regions and was very common near human habitation. It breeds in small colonies on tall trees even close to villages and cities.

OBSERVATION

Even in 1980s there were thousands of vultures in the city like Kolkata. From the fag end of the last century, it was noticed that the vulture population was declining and in fact, there was no vulture observed in Kolkata, a megacity of India from 2003-2007. From October 2005, a very small number of vultures were noticed in the suburbs of Kolkata metropolis but there was none in the city proper. One fine morning in January 2008, a flock of 28 White-rumped vulture [*Gyps bengalensis*] was observed (Fig. 1) on the tall trees (*Pterygota alata*) in the garden of Victoria Memorial, situated in the heart of the city. The nesting and breeding behaviour of the same flock was observed in the following months and altogether three nests with

nestlings were identified in the month of April 2008 on *Parkia aculeata* tree (Fig. 2). The flock excluding the nestlings was counted up to 39. A continuous monitoring revealed that the number of vultures in the flock becoming less from the end of June and only 17 was counted in the first week of July 2008 and there was no bird observed in the breeding site by the end of the month. Whereas, 3 White-rumped Vultures were sited near Rajarhat, a township about 15 km east of Victoria Memorial on 27th July 2008 and 14 of them were observed on the wing at Salt Lake situated in between Victoria and Rajarhat. It may be assumed that the same flock was shifted to somewhere east of Kolkata for better shelter and food. Mitra (2008) only reported the sighting of the White-rumped Vulture at Kolkata.

Though, after a long gap, White-rumped Vulture is breeding in the Kolkata metropolis yet those birds looked little sick. There may be food crisis in and around the city as at present there is no cattle shelter in the city proper. Thus, getting carcass for food may be rather difficult for them. Another reason for shortage of carcass may be due to the high price of skin in the leather industry. Very recently, the meat is used by the fish farms for feeding *Clarias garipinus* (Burchell), a North African cat fish and alien species to India. Earlier three species of vulture were common in Kolkata and its suburbs. Other than White-rumped vulture, two other species were Red-headed Vulture [*Sarcogyps calvus* (Scopoli)] and Slender-billed Vulture [*Gyps tenuirostris* (G.R. Gray)]. The last two species, so far have not been observed either in Kolkata or in its suburbs after 2003.

DISCUSSION

From the end of the last century, the White-rumped Vulture being found dead and dying in its roosting places in Kolkata and its surroundings and major declines and extirpations were being reported. It was initially thought that the causal agent for the death of vulture is an unknown virus but detailed study revealed that, it was due to the dreadful drug diclofenac (Oaks *et al.* 2004, Green *et al.*, 2004, Shultz 2004) which was a very common medicine for the cattle. After consumption of the diclofenac treated carcasses, the vultures were affected by visceral gout, renal failure and ultimately die. Other factors likely the use of pesticide, changing in processing of dead livestock *etc.* may have minor



Fig. 1. A flock of White-rumped Vulture in the garden of Victoria Memorial



Fig. 2. Nest with nestling of White-rumped vulture in the garden of Victoria Memorial

significance. Poharkar *et al.* (2009) identified malarial parasite from the tissue of both live and dead White-rumped Vultures. Further, amplification and sequence analysis of the consensus sequence of the mitochondrial small and large sub-unit rRNA genes indicated a 95 to 96 percent similarity with the mitochondrial sequence of *Plasmodium falciparum* (DQ642845) and other *Plasmodium* species. In addition, amplification and sequencing of a 502 bp fragment of the mitochondrial *cyt b* gene identified the haemoprotozoan with *Plasmodium* sp. AP70, an avian malarial parasite. During the study, they have also rescued two terminally ill vultures and treated with anti-malarial drugs which led the vultures to live. It was also reported that none of the effected vulture had diclofenac residues. Thus, malaria may also be an additional parameter for rapid declining of the White-rumped vulture.

Thus, for proper conservation and to save them from extinction, in-situ conservation in protected areas is very much needed. Not only the species itself, but also conservation for their feeding and breeding ground is also of same importance. The places are to be identified wherever it may be, whether near the human habitation or in protected areas or any where in the country. For proper monitoring, a vulture sighting

calendar with a wide network is to be introduced along with people's participation. Moreover, as conservation measure Government of India has already banned the drug diclofenac in 2006. As the drug is very cheap and has already been widely introduced, so regular monitoring for the same is needed.

SUMMARY

A flock of White-rumped Vulture was seen to breed in the Kolkata city proper in 2008. The bird was not observed in the city since 2003. Even in the near past it was a very common and familiar avian species of Kolkata. Though it has started breeding in the city yet its number, health and total appearance is not very promising. Though the highest conservation status has already been provided to the bird yet conservation of its feeding and nesting place is very much needed. For proper monitoring a vulture sighting calendar has to be prepared. Govt. of India has already phased out the drug diclofenac but as the drug is very cheap and widely introduced so regular monitoring is necessary.

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