



POPULATION STUDY OF CRITICALLY ENDANGERED INDIAN WHITE BACKED VULTURES, *Gyps bengalensis*, AFTER THE BIRD HAZARD PROJECT AND ITS CONSERVATION IN INDIA.

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ABSTRACT

In this paper author is intending to enumerate and pinpoint the patches of vulture survival in India. Vultures have declined in their habitat since 1990 drastically. There are two schools of thoughts. One is pinpointing the drug diclofenac exclusively while the other school is stressing on the food shortage and habitat destruction for the decline of vultures. The aim of both the thought is to revive this biological incinerator of Nature.

KEYWORDS

Vulture, Population, Conservation

INTRODUCTION

Bird hazard project was initiated by Ministry of Defence, Government of India through Indian Agricultural Research Institute (IARI) and the Bombay Natural History Society (BNHS) from 1982 to 1988 and author was the part of research team. Salim Ali (1972) stated that but for vultures, Indian country side will stink with rotting live stock carcasses. One of the biggest hazards to flight safety, all over the world is the menace by birds. In India the magnitude of the problem is much greater due to the species of birds – the vultures and pariah kites, that our aviator have to contend with. No country in the world can afford to lose valuable aircraft and invaluable pilot at this rate. The bird menace in our country has already assumed grave proportion and needs to be tackled on war footing at the national level by all possible means. Birds naturally conglomerate where food is readily available. The need of hour is to deny these birds such large scale open air catering service. An effective start in this direction would be to ensure cleanliness in and around our airfields and those recognized routes of air operations where aircraft perforce have to fly low, Air chief Marshal Dilbagh Singh (1982).

We simply cannot go back to nature whether it is the problem of birds. The answer of the problem probably will be found not by eradication but by manipulation of techniques. You can change the ecology taking into consideration all their likes and dislikes. We have to study the psychology of birds & it lie in the availability of food. The answer can lie in ecology and other behavioral science, Jain (1982).

Indian griffon vultures seem to be thriving when seen from the surface. In fact there is not any decline on the population of griffon vultures in totality and they are thriving to the extent that a certain species (Indian white backed vulture *Gyps bengalensis*) has phenomenally proliferated at many areas (Urban). But the very nature of proliferation of this species gives a foreboding of the future status of griffon vultures in India. Indian white backed vulture is the commonest and most abundant vulture in India, distributed throughout the entire peninsula. Wherever we see vultures at carcasses, they appear to hold ground and do not in any way appear to be threatened. However, underneath this apparent prosperity, there is some serious problem, a calamity yet to surface but likely to strike if the prevailing situation is permitted to drift and take its own course. We see two major problems threatening the Indian griffons, specially white backed vulture: One is diminishing of natural habitat and natural food sources and the other unnatural proliferation of the griffon around large towns and cities, Grubh (1983).

Since the 1990s vulture population across the Indian subcontinent have collapsed, Gilbert et al. (2002), Prakash et al. (2003), and the Peregrine Fund (2004), at least three species have been affected: the Indian white backed vulture, *Gyps bengalensis*, long-billed

vulture, *Gyps indicus* and slender billed vulture *Gyps indicus*. Populations have declined by more than 95% within about 10 years, Prakash et al. (2003), and the Peregrine Fund (2004), leading the IUCN, world conservation union to list all three species as critically endangered (Hilton-Taylor 2000).

The Indian White backed vultures, *Gyps bengalensis*, presently critically endangered species was formerly widely distributed in India from the Himalayas west to Srinagar, east to Arunachal Pradesh, Assam and the north east hill states, south to the southern Western Ghats in Kerala and Tamil Nadu, Islam and Rahmani (2002).

30 million was the number of Indian white backed vulture across north in the 1990s. It's number now down to 11000. Expert blame this on the use of diclofenac, a banned anti inflammatory drug, on cattle, Indian Express (May 4, 2008).

In this paper an attempt is made to enumerate the Indian white backed vulture and pin point the places of their survival which in turn will help the conservator of vultures to develop the strategy of conservation

RESULT AND DISCUSSION

During different excursions Indian white backed vultures were counted across India. Table 1. Since author has moved all around India in the bird hazard project and tracking vultures in their past and present habitation, it was observed that the once sky lords now struggling for their survival. In the present study West Bengal still hold the ground and the ray of survival of vultures.

Singh & Chakravarthy (2006) experimented on captive vultures and provided the food with known quantities of fresh meat daily and at interval of two, three, four and five days. It was found that the average consumption rate of individual and grouped birds at one, two, three, four, five days intervals was 300 gm, 516 gm, 585 gm, 634 gm and 659 gm individually and 293 gm, 547 gm, 592 gm, 699 gm, and 713 gm in groups the average consumption rate of putrefied meat of two, four and six days old by vultures that were starved for four, six and eight days was 408 gm, 283 gm and 161 gm respectively. It holds the ground that vulture can survive normally even after consuming putrefied meat and having starved for eight days.

Singh et al. (2016) observed the strong impact of carcasses handling workers' strike on the massive starvation and abandonment permanent feeding ground and roosting sites by Indian white backed vultures at the outskirts of Mumbai, India. This may contribute to drastic decline of vultures not only in Mumbai but also in other areas of the Indian sub-continent and south east Asia. Such socioecological issues need immediate attention for conserving Nature and its dependents like the vultures.

Table 1. Vulture sighting at different places in India.

Date	Place	No. of white back vulture
18/02/1995	Palghar	8-10
28/01/1996	Sakhara dam near Vangao railway station, Dahanu	15-20
29/02/1996	Palghar	10-12(LBV)
14/09/1999	Toward national highway (NH8) Harishachandra nagar, vaghoba	15
14/09/1999	Nh8, Tungreshwar temple (vasai)	20
14/09/1999	NH8, Korakendra near dairy area	8-10
12/10/1999	Palghar (school- twinkle star)	35WBV-15LBV
23/01/2000	Boisar	15-20
22/04/2000	Palghar (bidco) railway track	7-roosting
25/09/2000	Palghar (bidco) railway track	5- circling
25/09/2000	Palghar (mahim)	4-5
08/10/2000	Kachigaon (daman)	3
01/11/2000	Calcatta botanical garden, Zoological park	200-250
03/01/2001	New jalpaiguri (W.B)	15
08/11/2001	Silguri (tea city)	50-60
07/01/2001	Palghar	2
17/02/2001	Palghar	5
26/03/2001	Palghar (railway track)	7
15/04/2001	Palghar (vagulsaar)	1
23/04/2001	Palghar	2
23/04/2001	Palghar	1
29/04/2001	Palghar	3
30/04/2001	Palghar	1
11/10/2001	Palghar	1
13/10/2001	Palghar	3
27/10/2001	Palghar	2 LBV
12/11/2001	Palghar	2
01/03/2002	Palghar	8
14/01/2002	Near Trumbkeshwar hills	15
14/03/2003	Palghar	9+1LBV
20/04/2003	Kelva railway station	8+2 LBV
August 2004	Palghar	10-15

CONCLUSION

In the present study it was found that in India still patches are found which are the ray of hope for the revival of vultures to the conservators provided authorities are helping to create natural restaurant away from the airfields.

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REFERENCE

1. Ali S. 1972 The Book of Indian Birds. Bombay Natural History Society.

2. Air chief Marshal Dilbagh Singh (1982).Message –At management of problem birds in aviation and agriculture, IARI, New Delhi on, May 25-26, 1982.

3. Gilbert, M., Virani,M.Z.,Watson, R.T., Oaks, J.L., Benson, P.C.,Khan, A.A., Ahmed, S., Chaudhry, J., Arshad, M., Mahmood, S. and Shah, Q.A.2002. Breeding and mortality of oriental white backed vultures Gyps bengalensis in Punjab Province, Pakistan. Bird conservation International, 12., 311-326.

4. Grubh R. B. 1983. Birds versus Aircraft can Birds and Air craft coexist in India, Science Age 1(2) :56-58.

5. Hilton-Taylor, C.2000.IUCN Red List of Threatred Species, IUCN, Gland and Cambridge.

6. Houston D. C. 1973. The ecology of Serengeti vultures, Ph. D. thesis submitted to the University of Oxford.

7. Islam, M.Z. & Rahmani, A.R.2002. Threatened Birds of India. Bucero Vol.7, No.1&2, 2002.

8. Jain, H.K. 1982. Welcome address–At management of problem birds in aviation and agriculture, IARI, New Delhi on, May 25-26, 1982.

9. Prakash, V., Pain, D.J.,Cullingham, A.A.,Donald, P.F.,Prakash, N.,Verma,A.,Gargi, R.,Sivakumar,S. & Rahmani,A.R. 2003. Catastrophic collapse of Indain white backed vulture, Gyps bengalensis and long-billed, Gyps inidcus vulture population. Biological Conservation, 109,381-390.

10. Singh,R.B. and Chakravarthy, A.K. (2006) Food consumption by captive Indian White backed vultures Gyps bengalensis under diffrent feeding condictions. Vulture News54 : 11-19.

11. Singh,R.B., Chakravarthy, A.K. and Jayashankar,M. (2016). Impact of carcasses handling workes' strike on Indian white backed vultures, Gyps bengalensis Gmelin at the outskirts of Mumbai in India.Dhruv development of human research under

values and action 2 (2) :4-10.

12. The Peregrine Fund 2004. the Peregrine Fund, Boise, ID
<http://www.peregrinefund.org/vulture>.