



International Journal of Fauna and Biological Studies

Available online at www.faunajournal.com

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International
Journal of
Fauna And
Biological
Studies

ISSN 2347-2677

www.faunajournal.com

IJFBS 2020; 7(3): 75-77

Received: 01-03-2020

Accepted: 03-04-2020

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Report on the occurrence of three vulture species in Gadchiroli forest division M.S. India

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Abstract

Vultures are among the fastest declining species in the world and much attention has been focused on this highly threatened group of scavengers. In south Asia, sites, where multiple vulture species occur together, have become a rare phenomenon. Here we report on Gadchiroli Forest Division in Maharashtra, central India, which holds a sizable population of vultures. The forest department aims to provide food for vultures and to improve their survival through the establishment of vulture restaurants. The present report describes the recording of three vulture species in the forest division, namely Long-billed *Gyps indicus*, Oriental White-backed *Gyps bengalensis*, and Griffon *Gyps fulvus* ssp. *fulvescens* Vultures.

Keywords: Vulture, Gadchiroli, *Gyps*, vulture conservation, vulture restaurants

Introduction

Gadchiroli (20°06'0.00" N 80°00'0.00" E) is the easternmost and most heavily forested District of Maharashtra state in India and, like many parts of India and South Asia, historically contained abundant populations of vultures. However, since the mid-1990s, populations of *Gyps* vultures in Gadchiroli and elsewhere experienced catastrophic declines due to the use of the non-steroidal anti-inflammatory drug (NSAIDs), mainly diclofenac, in veterinary applications. These drugs caused renal failure and avian gout in vultures, leading to their deaths (Green *et al.* 2004; Oaks *et al.* 2004; Shultz *et al.* 2004) [3-5], inadequate food supply (Botha *et al.* 2017) [2].

Oriental White-backed and the Long-billed Vultures were the most widely distributed and numerous species, but these (along with the Slender-billed Vulture) are now categorized as Critically Endangered on the IUCN Red List of Threatened Species and are provided highest legal protection on Schedule 1 of the Indian Wildlife Protection Act (WLPA), 1972.

Materials and Methods

The simple survey and observation method was taken up for the observation. The local informants were trained in a way that after the sighting of the vulture they will inform the investigators. Similarly, the carcasses served in the Vulture restaurants were the most lucrative and easy invitation to the Vultures. In this way, the Vultures were invited, and then the observations were made. Digital cameras (Sony DSC Hx 400V, Canon 5300D) were used to capture the photographs of the vultures, and binoculars were used to make observations and record behavior. Each species was identified using standard literature like Ali and Ripley (2007) [1], Botha *et al.* (2017) [2].

Study area

The present investigation was carried out throughout 2018, during which regular observations were noted down. The Maharashtra State Forest Department started an initiative to provide food for vultures by creating a network where the department is informed of cattle deaths, after which a forest official will contact the owner of the cattle and pay them a predetermined amount. Prior this official will ensure that the animal died either of natural causes or with a minor ailment, and not because of poisoning. Then the carcasses are then brought about in the Vulture restaurant and dumped. Vultures mostly arrived to feed on the same day or the second day, but on other occasions did not visit the restaurant. The observation team made observations from a distance that avoided disturbing the feeding birds.

Apart from the carcasses taken to the restaurant, other natural deaths of cattle from nearby villages were dumped at a place near the village, called *Dhorphodi*. The vultures also visited these places to feed.

Result & Discussion

Our study revealed that the three *Gyps* species are found in Gadchiroli Forest Division (Table 1). The population of White-backed Vulture (*Gyps bengalensis*) was observed to be more numerous compared to the other two species. The least numerous species were Griffon Vulture (*Gyps fulvus*) whereas

Long-billed Vultures (*Gyps indicus*) were observed intermediate. Although Griffon Vulture is classified as Least Concern by IUCN, the local subspecies *Gyps fulvus fulvescens* is observed only rarely, which is a potential cause for concern and should be investigated further.

Table 1: *Gyps* species found in Gadchiroli Forest Division

Common Name	Scientific Name	IUCN Category
Indian Vulture, Long-billed Vulture, Indian Griffon, Long-billed Griffon, Painted Vulture	<i>Gyps indicus</i>	Critically Endangered
White-backed Vulture, White-backed Vulture, Asian White-backed Vulture, Oriental White-backed Vulture,	<i>Gyps bengalensis</i>	Critically Endangered
Griffon Vulture, Eurasian Griffon, Eurasian Griffon Vulture	<i>Gyps fulvus fulvescens</i>	Least Concern



Fig 1: Carcass of buffalo at Vulture restaurants



Fig 4: *Gyps indicus*



Fig 2: *Gyps Bengalensis*



Fig 5: Mixed population of Vultures feeding carcass



Fig 3: *Gyps fulvus ssp. fulvescens*



Fig 6: Study team at Vulture restaurant

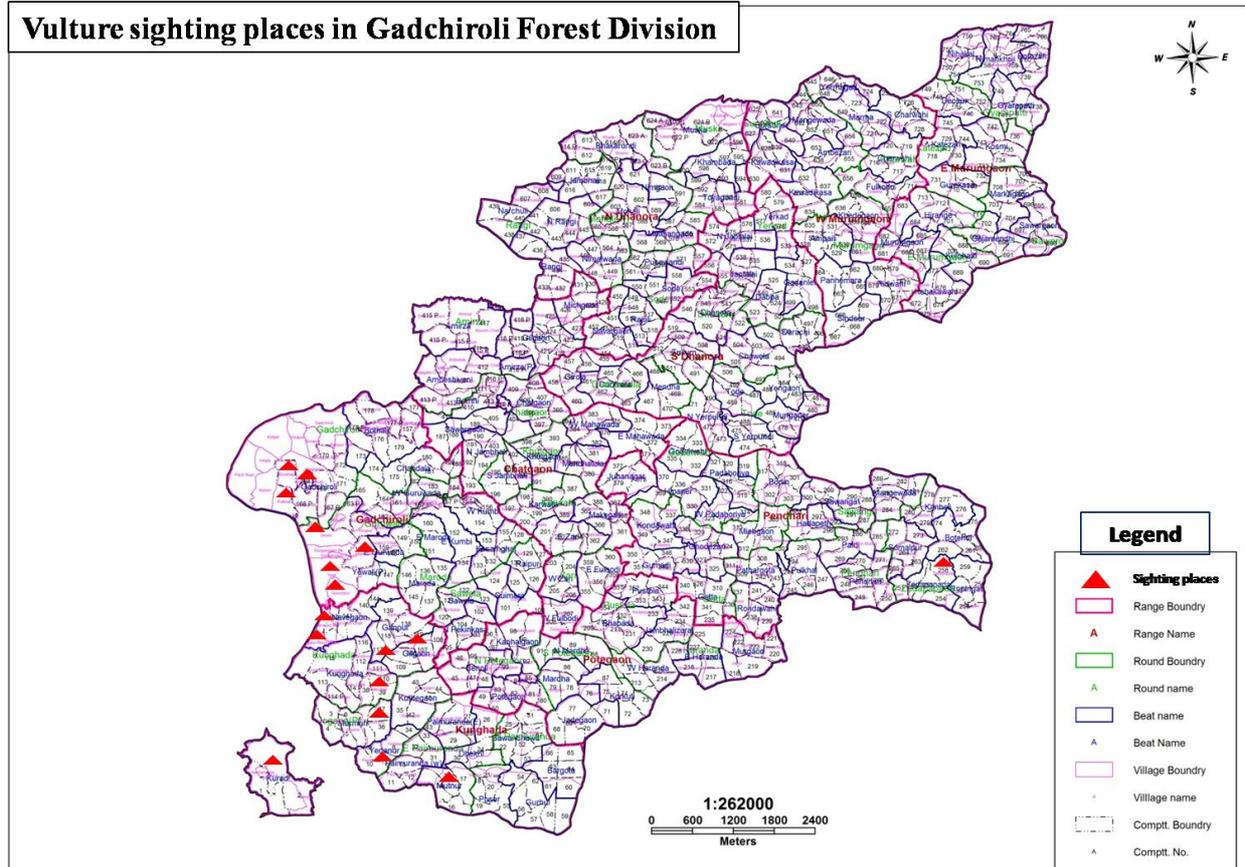


Fig 7: Vulture Sighting Places

Conclusion

This is the first comprehensive scientific note from this region with a clear cut mention of the Vulture species and their occurrence. Gadchiroli is one of the safe places for the vultures in Central India. With continuous monitoring and feeding the population trend seems growing. In the future, some more efforts need to track and conserve the Vultures in this area and this region can easily be announced as Vulture Safe Zone.

Acknowledgments

The authors are thankful to the Maharashtra State Forest Division for providing necessary help and permissions. Special thanks to Sanjay Karkare for a note on identification. Thanks to Mahesh Shinde, Vishal Salkar, Mahesh Talmale, Shubhash Medpallwar, Kiran Wasekar, Rahul Kapkar, Sharad Doke, Nikesh Bharne, Mahendra Nanhe, Neha Chaudhari and Anjali Kulmethe for their valuable help during the study.

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