

An Account on the Habitats and Threats Vis-À-Vis Indian Spotted Eagle in Kurukshetra Environs in Haryana (India)

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Abstract: The habitats of Indian Spotted Eagle in Kurukshetra are very restricted, away from the gaze of common human beings. At international level, the taxonomic jargon prevails upon the correct identification features and tools in respect of (i) Lesser Spotted Eagle *Aquila pomarina* (Brehm, 1831) (ii) Greater Spotted Eagle *Aquila clanga* (Pallas, 1811), (iii) Indian Spotted Eagle *Aquila hastata* (Lesson, 1834) and various hybrids and their respective age pyramids' birds. Forgetting the complications, herein it is highlighted that isolated populations of Spotted Eagles are even, now available in Kurukshetra Environs in Haryana, India. In correlation with its dependence on small sized mammals for food, the bird has been spotted in totally isolated open grassy un-manuevered agriculture fields preserved as inter-space between different new residential blocks of Sushant City on National Highway-1, 3 Kms away from Kurukshetra, down south towards Delhi. The other groups/populations spotted include in Nilokheri Town, 16 Kms down south from Kurukshetra. These birds were seen in a very activity-filled mode of flight in skies, perching on electricity poles in avenues and simultaneously vigorously overflying agriculture fields dotted with bills of wild rodents. Such limited populations of Indian spotted Eagle are found between far and few. The places where Indian Spotted Eagle was seen are actually quite uncommon and so is this very rare bird. Present studies indicated that these uncommon habitats are on fast depletion, thereby further pushing this bird towards extinction. It is suggested that WWF (International) should constitute a task force of field ornithologists in Haryana (India) to focus attention on such rare habitats and rare birds to understand these in primary details to ensure the sustained availability of habitat, prey base, roosting and nesting sites for varied avian fauna in peril, in particular.

Keywords: *Aquila hastata* • Encroachment of habitat • Haryana

INTRODUCTION

Due to prevalence of inter-specific hybridization phenomenon in spotted eagles, just like in many other birds, there is a sense of marked confusion in respect of error-less identification of Lesser-Spotted Eagle: *Aquila pomarina* and Greater Spotted Eagle: *Aquila clanga* and Indian Spotted Eagle: *Aquila hastata*. The confusion further escalated due to the presence/ absence and extant of white color on nape, coverts etc. Lesser Spotted Eagle and Greater Spotted Eagle are two closely related sympatric Eurasian raptor birds' species which, according to one estimate, diverged one million years ago [1]. The eastern populations in the world got evolved into *Aquila clanga* and those in the west into *Aquila pomarina*. The

conservation status is still unknown [2]. The spotted Eagle in India has been studied only by few workers [3-7]. Some mention has also been made by Bishop [8] while writing preliminary notes on some birds in Bhutan. No studies, whatsoever, have been done on Indian Spotted Eagle in Haryana (India) and hence the present studies. However, considerable work has been done on birds in the Zoology department of Kurukshetra University in the last 25 years or so [9-19]. In the present studies, preliminary information has been generated on the prevalence of habitats/pockets of Indian spotted eagle in Kurukshetra environs in India to focus attention on the basis of availability of populations and their future survival prospects in the face of total encroachment of habitat and multitude of other relevant threats that this highly endangered bird is confronted with.

MATERIALS AND METHODS

The present studies have been carried out in Kurukshetra district as also in some parts of Karnal district. The surveys were done on national highway no.1 (Sher Shah Suri Marg) and on Kurukshetra- Yamunanagar state highway. In all, 3 spots were first identified and successively the observations were undertaken. The geographical position of Kurukshetra lies between Latitude 29°52' to 30°12' and Longitude 76°26' to 77°04'. The landscape of the study area is characterized by the extra-ordinary intensive agriculture practice round the year with three to four crops of rice, wheat and sunflower etc. the tree cover is identified by the eucalyptus trees and popular plantation on roadside and fields' periphery respectively. The other salient feature of the landscape is the availability of isolated barren plots of land in the midst green fields and in demarcated land plots in Huda-estates etc.

The clue to the existence of Indian Spotted Eagle in Kurukshetra was provided due to the frequent trips on national highway no-1 and Kurukshetra-Yamunanagar Highway. Soon after the chance discovery of two isolated population nearby Sector-32 of Kurukshetra and the outskirts of Nilokheri Town, search was conducted in a serial manner in the adjoining areas and subsequent trips were made based on curiosity as well as by obeying the moral standards as per the limited facility under personal computations. The Camera used was Zenith with Russian Made Tele-lens and DSC-L6.

The identification was done by consulting appropriate National Labs in addition to Books [20-21].

RESULTS AND DISCUSSION

The various spots detected for the prevalence of Indian Spotted Eagles scattered populations in Kurukshetra and Karnal district are given in Table 1. It is evident from table-1 that all the Indian Spotted Eagle populations/groups merely consist of minuscule numbers ranging between 25-20-10-or so. It is also evident from table-1 that Indian Spotted Eagle prefers un-ploughed open neglected agriculture fields where wild rat populations are in abundance. Rasmussen and Anderton [22] reported that Indian Spotted Eagles occurs in open woods, cultivation and near water and even in urban gardens. Moreover, these neglected fields support rich cover of unmendid grasses, weeds, bushes etc so as to completely provide cover for rats. In this scenario, the spotted eagles were found engaged in a struggle where most attempts to reach out to a rat failed. Prakash [5] observed that Indian spotted Eagle feed mainly mammals, frogs and birds.

All wild populations of Indian spotted eagles were located on the near out skirts of towns and cities and never within the city or bordering premises. The Indian spotted eagles were observed to take short duration aerial forays just over the fallow fields and never elsewhere.

Table 1: Spotting of Indian Spotted Eagles from the various sites in the Kurukshetra environs during study period.

S.No	Name of Spot	Landscape Peculiarity	Comments	District	Approximate number of Indian spotted Eagle
1	Sushant City	Unploughed Fields	Dotted with rodents' Bill	Kurukshetra	20-25
2	Mathana	Rice Mill	Dotted with rodents' Bill	Kurukshetra	5-7
3	Bir-Sonti	Forest area	Small mammals and birds	Kurukshetra	8-10
4	Mustafabad	Unploughed fields	Dotted with rodents' Bill	Kurukshetra	3-4
5	Shahbad	Unploughed fields	Rice Mills	Kurukshetra	5-8
6	Samana	Wheat Crop	Dotted with rodents' Bill	Karnal	3-4
7	Raipur	Unploughed fields	Dotted with rodents' Bill	Karnal	2
8	Barthal	Unploughed fields	Dotted with rodents' Bill	Karnal	9-10
9	Anjanthali	Unploughed fields	Dotted with rodents' Bill	Karnal	10-12
10	Sandhir	Unploughed fields	Dotted with rodents' Bill	Karnal	4-5
11	Mirjapur	Unploughed fields	Small mammals and birds	Kurukshetra	2
12	Mohri	Unploughed fields	Dotted with rodents' Bill	Kurukshetra	3-4
13	Jyotisar	Fish Farm	Cultivated land	Kurukshetra	3-4
14	Jhinwarehri	Unploughed fields	Dotted with rodents' Bill	Kurukshetra	2-3
15	Kharindwa	Wheat Crop	Small mammals and birds	Kurukshetra	3-4

The grace and majesty of the spotted eagles is defined by their stately features of contour feathers and special liking for neat clean, open habitats lit with sunlight and un-ploughed fields.

In all fifteen isolated groups of Indian spotted eagles could be spotted in the study area of 100 Sq. Kms in Kurukshetra and Karnal districts. Present observations indicate towards the fact that Indian Spotted Eagles always prefer Outskirts (2-3 miles away) from traditional boundaries of towns. The Indian spotted Eagle always maintain a low profile Sky-borne condition and that too for 1-2 minutes and never more. Actually, their flight scans between surveying the fallow fields for rats and perching on electric poles. Spotted eagles sit on Electricity poles on avenues and present a scenic scene of stationing in a regimental style. Indian Spotted Eagles are very shy of human beings. Prakash [5] characterized the preferred habitat as grove of trees surrounded by grassland and fields in summer and marshes close to grassland and forest in winter. Indian Spotted Eagle found in agriculture fields, wetlands, open forest and forest clearing. Their nests could never be sited. Prakash [5] stated that nest of Indian spotted eagle is circular, flat structure placed in a fork near the top of tree. Clutch size is usually one egg or sometime two [5]. The present studies clearly point out towards the fact that these birds face a high degree of danger due to 100% habitat encroachment. Prakash [5] reported that the main threat to this bird is due to the conversion of forest to agriculture habitat, human encroachment and disturbances. however, according to our studies in the present times, these birds face extinction due to the possible conversion of fallow fields into grass covered lawns. It is suggested that WWF (International) should constitute a task force of field ornithologists in Haryana to focus attention on such rare habitats and rare birds to understand these dynamics in primary details to ensure the sustained availability of habitat, prey base, roosting and nesting sites.

It is recommended that Govt. of Haryana in general and MOEF at centre (Govt. of India) should rise to the occasion on time/ before time/ will within time to save Indian Spotted Eagle and other birds by conceiving “Composite Conservation Projects” for Avian Biodiversity rather than doing paper work only.

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