STATUS AND DISTRIBUTION OF HOG DEER (*AXIS PORCINUS*) IN PROTECTED AREAS OF SUB-HIMALAYAN WEST BENGAL

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Introduction

The Hog deer (*Axis porcinus*), a relative of Chital (*Axis axis*), has long been recognised to be one of the rarest wildlife species in the world. It now exists in certain Southeast Asian countries, but frequently in fragmented and degraded habitats. Being commonly known as 'Para' in India, it is sparsely distributed along the Himalayan foothills from northern to eastern India (Prater,1998) and is listed as 'Lower Risk - near threatened' in the 1996 Red List of Threatened Animals and in the Indian Mammal Conservation Assessment and Management Plan. Available data indicated that a small population of this species survive in the diverse and mosaic vegetation covers of one to two protected areas (PA) of sub-Himalayan West Bengal, but information on its status and distribution is scanty. The present study was undertaken to identify those protected areas, including their blocks and compartments where known sizes of population survived. This information would help to estimate total population density in the region in future study.

Study area and Methodology

The study on status and distribution was divided into two phases. In the first phase, a preliminary survey was conducted during the months of June to September 1998 to assess the current status of Hog Deer in six Wildlife Sanctuaries (WLS) and four National Parks (NP). The Wildlife Sanctuaries are Mahananda (127.22 sq.km.), Senchal (38.88 sq.km.), Jorepokhri (0.04 sq.km.), Jaldapara (216.51 sq.km.), Chapramari (9.49 sq.km.), and Buxa (251.89 sq.km.). The National Parks are Singhalila (78.60 sq.km.), Neora Valley (88.00 sq.km.), Gorumara (79.45 sq.km.), and Buxa (117.10 sq.km.) of sub-Himalayan West Bengal. All protected areas with or without previous records and those, which were reported to be inhabited by Hog Deer were visited with competent forest staff and observations as well as interviews were conducted. Data was collected from different forest blocks and their compartments in six wildlife sanctuaries and four national parks, and the months including June to September was spent in determining overall status in 10 study areas.

Field identification of Hog Deer was made by its pelage colours and morphological features (Dhungel & O'Gara, 1991), which included yellowish-brown to brown and/or reddish-brown to dark-brown colourations; heavily built long body, smaller size with short legs and hog-like movements. Further, the presence of white spots on the body coats, like those of Chital, was commonly found in fawns and rarely in yearlings.

The second phase of study was based on the findings of preliminary survey that indicated the existence of the species in the concerned protected area. On the basis of demarcation of forest areas laid down in Management Plan (Anon, 1997, 1998), two protected areas were divided into different blocks, followed by divisions of their compartments to facilitate carrying on the proposed intensive study on the distribution of Hog Deer. These blocks and their concerned compartments were monitored primarily on foot and on elephant back on a network arrangement in October and November, 1998. The study was conducted compartment-wise of a block. It took an average of two days of exclusive work in completing a compartment. This work included 44 days of total six months study period.

Results and Discussion

Only Jaldapara WLS and Gorumara NP harbour populations of the Hog Deer in their alluvial grasslands, mostly situated on the banks of rivers Torsa, Jaldhaka, and Murti and other rivulets. Earlier reports also indicated the status of the species in those two protected areas of the region (Anon, 1996), but information on the distribution of the animal is scanty. This study further showed that the populations were distributed sparsely in the grasslands with woodland successions of species like Khair (*Acacia catechu*), Sisoo (*Dalbergia sisoo*) and Simul (*Bombax ceiba*), Siris (*Albizia* sp.). Dense grassland vegetation covers were found as the principal dwelling place for Hog Deer. The status and distribution of Hog Deer in Jaldapara WLS and Gorumara NP are presented in Tables 1 and 2.

During 44 days of field study, Hog Deer was actually sighted in different blocks/compartments of the protected area when they came out to graze in the morning (0500-0800 hr.) and evening (1600-1800 hr.) in groups of small (2-5) and medium (6-19) parties. Direct observation revealed that the animal was present in 18

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Table 1. Status and distribution of Hog Deer in Jaldapara WLS.

Name of blocks	Identity of compartments	Status	Distribution of compartments
Bania	1,2,3,4,8b	Partly present	8b
Baradabri	1b,2,6b,7b	Absent	0
Chilapata	1,2,3b,4b	Present	1,2,3b,4b
Dalsinghapara	1,2,3,4	Absent	0
Hasimara	1,2,3,4	Partly absent	3,4
Jaigaon	1,2	Absent	0
Jaldapara	1,2,3,4,5	Present	1,2,3,4,5
Malangi	1,2,3	Present	1,2,3
Mendabari	3,4,5,6	Absent	0
Salkumar	1,2,3,4	Absent	0
Titi	1,2,3,4	Absent	0
Torsa	1,2,3	Present	1,2,3

Table 2. Status and distribution of Hog Deer in Gorumara NP.

Name of blocks	Identity of compartments	Status	Distribution in compartments
Barahati	1,2,3	Absent	0
Central	1	Absent	0
Dhupjhora	1a,1b,1c	Present	1a,1b,1c
Gorumara	1,2	Absent	0
Jaldhaka	1b	Present	1b
Kakurjhora	1,2	Absent	0
Selkapara	1,2	Absent	0
South indong	1,2,3	Absent	0
Tondu	1,2a,2b,3,4a,4b	Absent	0

compartments of 6 blocks in Jaldapara WLS, covering an area of 10,254 ha. (96.04 sq. km.); 44 per cent of the total cover area. However, the distribution of the population was patchy in Jaldapara, Chilapata and Malangi blocks, but sparse in Bania, Hasimara and Torsa blocks of the Sanctuary. Lower distribution of species in certain blocks is perhaps due to woodland succession in the grassland where availability of food and shelter appeared to be limited. In Gorumara NP, a small and isolated population of Hog Deer was observed only in Dhupjhora 1a, 1b and 1c and Jaldhaka 1b compartmets (Table 2), covering 648.91 ha.; 6.5 sq.km. grasslands.

Apart from Hog Deer, this type of vegetation also offered grazing ground for One-horned Rhinoceros (*Rhinoceros unicornis*), Gaur (*Bos gaurus*), Elephant (*Elephas maximus*), Chital (*Axis axis*), Sambar (*Cervus unicolor*) and Barking Deer (*Muntiacus muntjak*). The small areas of grassland covers, as well as the existence of other wildlife in the same habitats clearly indicates severe restriction of grazing fields, which in turn limits the status of the Hog Deer and sustainability of its larger population in the NP. The present survey further revealed unequal distribution of Hog Deer population in the compartments/blocks which may be ascribed to variation of floral species in the savannah grassland habitat and also threat and risk factors prevailing in Gorumara NP.

Based on the findings of this survey, the authors state that Hog Deer only exists in Jaldapara WLS and Gorumara NP of the region, but its distribution is sparse. An intensive study is required to estimate the total population in these protected areas to help design conservation strategies for the maintenance of genetic variability in long term breeding populations of Hog Deer in the wild.

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