

# ANTHROPOGENIC THREAT TO GAUR (*Bos gaurus*) IN BAISIPALLI WILDLIFE SANCTUARY, EASTERN GHAT, INDIA

by D.P. Sahoo and S.K. Das

## Introduction

The Indian Subcontinent is one of the most fascinating ecological and geographical regions in the world and remarkable for the variety of its large mammals with a richness in species exceeded by few countries in the world (Schaller, 1967). But the increasing human populations, urbanization, industrialization, deforestation and various other anthropogenic developmental activities have led to the rapid depletion of this magnificent biodiversity hotspot and the habitats of wildlife. India's Eastern Ghat is one of the key biodiversity areas that is facing high anthropogenic disturbance from different sites. Baisipalli Wildlife Sanctuary in Orissa is considered as the gateway to Eastern Ghat and one of the major conservation areas of this region. The vegetation of the sanctuary largely comprises northern tropical moist deciduous and dry deciduous forests and moist peninsular low level Sal (*Shorea robusta*) forest. It is also a good habitat for gaur (*Bos gaurus*), which is listed under Schedule-I of the Wildlife (Protection) Act, 1972. But this area is highly affected by different human activities which are causing the gradual depletion of habitat of wild animals including Gaur. Previously, Rout (2005) studied the anthropogenic disturbances in Similipal Biosphere Reserve of Orissa. Studies on threats to gaur date back to Duckworth *et al.* (1999), Sankar *et al.* (2000), Choudhury (2002), Steinmetz (2004) and Pasha *et al.* (2004). In Eastern Ghat, Baisipalli is an unexplored area. There is no information available on threats towards gaur or about the local community's attitude towards its conservation. Therefore, the present study aimed to document the baseline information on threats to the studied species and to create awareness among different levels of society to conserve this vulnerable species (Duckworth *et al.*, 2008).

## Methodology

The study was carried out from January to June 2010. To evaluate different threats to gaur within the sanctuary, two methods were used during the field survey, i.e., interviews with local people and site condition monitoring. During the interviews the people were asked questions about the causes of the gradual decline of the gaur population within the sanctuary. Through site condition monitoring, types of disturbances such as human encroachment into the core area (for timber, bamboo, fuel wood, different forest products like resin, honey, fruits, flowers, seeds, leaves, poaching purpose), types of habitat degradation (like forest fires, logging, developmental works, etc.) and the effects of grazing were noted.

## Results and discussion

### *Site condition monitoring*

During the study period twenty selected sites were visited, each site covering 10-15 km. Gaur sightings and evidences were found in 9 sites (45%). Out of the 9 sites of gaur-occupied areas, 7 sites (77%) were affected by forest fires. Most of the forest fires were found to be man-made. People set fires for collection of mahul flower (*Madhuca indica*), for hunting purposes, and in some cases as mischief. People of BWLS were also dependent on the forest for wood and bamboo. Outside people were also involved in transporting timber from the sanctuary to the outside with the help of local poor tribals. Five sites (55%) were found to be mostly affected by such felling activities. Livestock grazing in the forest is a common feature of BWLS. In places where gaur evidences were found, evidence of hoof marks and cattle dung were also found at the same or nearby places. It was found that livestock are the main competitors of gaur in its

habitat. Eight (88%) out of nine sites were found to be affected by livestock grazing.

#### *Interviews with local people*

From interviews with the local people the following information was gathered. As gaur meat was eaten by the Harijan people, these people were involved in gaur poaching. Gaur poaching in 3 out of 9 sites was recorded by the local people during the study period. They also said that contagious diseases like Foot and Mouth Disease (FMD) are one of the main causes of the reduction of the gaur population in BWLS. Pasha *et al.* (2004) considered that 'in fact, no wild animal in India is so profoundly influenced by transmitted infection from domestic livestock as Gaur'.

#### *Local people's attitude towards gaur conservation*

In Baisipalli Wildlife Sanctuary (BWLS), a mixed reaction towards gaur conservation was found among local community. A total of 109 people were interviewed where the male-female ratio was 2.2:1.1. Almost all were farmers and also dependent upon forest products for their livelihoods. The people considered gaur to be a dangerous animal because there were previous records of humans killed by this animal in the sanctuary. Among the respondents 46.78% had positive feelings towards gaur conservation, but 31.2% were found to have negative feelings; 21.1% had no opinion about this aspect.

#### **Suggested conservation measures**

The following conservation measures were suggested for better conservation of the species within the Sanctuary.

- People should be encouraged to plant trees around the periphery of their villages to fulfill their requirements and should be permitted to collect firewood, NTFP products, and bamboos from those periphery jungles, but their encroachment into the core forest should be strictly prohibited.
- Poaching should be strictly prohibited through stringent legislations and offenders should be punished.
- A boundary should be marked in each village beyond which livestock grazing should not be

permitted and the grazer disobeying this should be punished.

- A vaccination program for livestock should be encouraged to prevent livestock from transmitting diseases to gaur. Steps should be taken to minimize disturbance in areas inhabited by gaur.
- Research should be conducted in different seasons to study the ecology of gaur in BWLS for better management of the species within the sanctuary.
- The awareness level about wildlife conservation among the local community in and around the sanctuary is very low. Therefore, awareness-raising programs are necessary up to the grass roots level to motivate people towards the wildlife conservation and protection.

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Authors' address: Debiprasad Sahoo and Sunit Kr. Das, Research Scholar, P.G. Department of Wildlife and Conservation Biology, North Orissa University, Sriram Chandra Vihar, Takatpur, Baripada-757003, Orissa.

Email: [debi.sahoo254@gmail.com](mailto:debi.sahoo254@gmail.com);

[sunit.das219@gmail.com](mailto:sunit.das219@gmail.com)

## FIRST RECORD OF EURASIAN OTTER (*Lutra lutra* L.) IN RAJIV GANDHI ORANG NATIONAL PARK, ASSAM

by Chatrapati Das

The Eurasian otter (*Lutra lutra*) historically occurs throughout the northeast India (Ruiz-Olmo *et al.*, 2008.) This species has been reported from Barail Reserved Forest (RF), Innerline RF, Manas National Park (NP), Nameri NP and Kaziranga NP by Choudhary (1997). In this note, I present a new sighting record of Eurasian otter in Rajiv Gandhi Orang National Park. On 20 April 2008, I, along with a forest staff official (Lachit Borgayari), went to Dighali *beel* (= wetland) to install a camera trap in front of an otter holt (N26° 32' 17.1" E92° 19' 41.1") on the bank of the wetland. The long rectangular wetland is flooded by the river Brahmaputra during the monsoon. The holt was built on the ground in the northeast corner of the wetland, and was well covered by *Narenga porphyrocoma*. At that point the width of the wetland was 20m. As we were preparing to install the camera at 12.15 h, I noticed some movement on the other bank about 25 m distance from us. I saw a small group of ten otters and managed to take video shots of them. The leader of the group was approaching, probably towards the holt along the bank, and other individuals were following it, but sensing our presence the leader ran back again, and the entire group vanished into the cover. However, there was no record of otter in the camera trap, which had been kept for three days. That means they did not visit the holt thereafter. We observed that the holt was active, which was evident by the presence of fresh sprint and foot prints.

Later on, from the video tape, I observed the following characteristics: the otters had very dense coarse fur which was dark olive brown on the back, lightening to a silvery brown on the throat and chest. The tail was thick and muscular at the base and the tip was flat and paddle-shaped. Paws were large and webbed between digits. Nostrils were W-shaped, an important feature distinguishable from *Lutra perspicillata*. These confirmed the identity of the animals as Eurasian otters. The presence of Smooth-coated otter *Lutra perspicillata* is mentioned by Talukdar & Sharma (1995) in Rajiv Gandhi Orang National Park. However, there was no record of Eurasian otter in this park hitherto. Therefore, it is the first sighting report of Eurasian otter in the Rajiv Gandhi Orang National Park.

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Author's address: Aaranyak, Guwahati-028, Assam, India; [chatrapati@aaranyak.org](mailto:chatrapati@aaranyak.org)