

# Envis

Wildlife and Protected Areas

ISSN 0972-088X

Vol. 07 No.1 2004

# Ungulates of India



भारतीय वन्यजीव संस्थान  
Wildlife Institute of India



# **Ungulates of West Bengal and its adjoining areas including Sikkim, Bhutan and Bangladesh**

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**1. Introduction**

## 1. Introduction

The Himalayas separates Palaearctic region from the Oriental region. The Oriental region is further divided into three sub-regions: Indian Peninsular, Malayan and Himalayan Montane sub-region. Thus the fauna and flora of the West Bengal is the representatives of all these regions. Although small, the state of West Bengal can be classified in to four zoogeographic regions, which resemble more outside the state. The fauna and flora of Darjeeling hills resemble more to the fauna and flora of Sikkim and Bhutan than the other fauna of the State. Similarly, there is resemblance between north Bengal and Assam, south west Bengal, Bihar, Jharkhand and Orissa, and Sundarbans of India and Bangladesh. Past records show that a variety of animals representing vast tracts of all these Zoogeographic regions were found in this State. In course of time, the rich flora and fauna gave way to increasing human pressure. The status (past and present), distribution and population of all ungulate species in West Bengal are discussed.

### **The Great Indian One-horned Rhinoceros (*Rhinoceros unicornis* Linnaeus, 1758)**

#### **Distribution : Past and Present**

Jalpaiguri (Gruning 1911, Hunter 1876). Past distribution within state is in Darjeeling (Hunter 1876), Cooch Behar (Campbell 1907, Bhaduri 1966, Hunter 1876), Malda (Sengupta 1969, Hunter 1876), Murshidabad (Agrawal et al. 1992) and also Sundarbans. Sengupta (1969) mentions presence in Malda although very rare. Bhutan (Bhutan govt. records).

Presently species is distributed in JWLS, GNP and CWLS (Agrawal et al. 1992). CWLS, JWLS and GNP (Respective Management Plans).

#### **Status**

Endangered in the State (Agrawal et al. 1992). In the past, species was covered under a special Act - The Bengal Rhinoceros Preservation Act of 1932. Population greatly decreased due to hunting. Maharaja of Cooch Behar (1908) killed more than 207 rhinos between 1871 and 1907 in forests of Cooch Behar and Buxa. According to Hunter(1876) big games in Malda district included rhinos were very rare due to deforestation (Banerjee 1966). There were about 200 rhinos in Torsa region and a dozen or so in other pockets in North Bengal in 1920 (Fawcus Committee Report). In later part of nineteenth century, a sportsman in Bengal Doors (a Planter) fired about 100 shots at rhino in one day killing five and wounding more than 25 (Dey 1987). Shebbeare and Roy (1948) report of about eighty rhinoceroses prior to 1930, but poachers killed about 50 rhinoceroses. Avari (1957) reports decrease in population reducing to less than a dozen due to poaching in thirties. In 1933, T.V. Dent collected about 50 skulls. Roy was made Honorary Game Warden of Jaldapara and scarcely ever saw a rhinoceros until 1936. There were about 25 rhinos in Hasimara (JWLS) in 1942 (Ahmad 1981). Annual report of 1936-37 mentions, although common in Jalpaiguri, the species showed tendency to extinction up to 1932 due to heavy poaching and since 1933 population began to increase in Buxa. Population had swelled to about 60 by the end of forties. Ahmad (1941) reports of about 60 to 70 rhinos in the State. Anon (1954) mentions of

some rhinos in Sankosh region of Jalpaiguri and a few scattered in Cooch Behar forests. The population increased up to 76 in 1966-67.

Pollock found the animal extremely plentiful and shot 44 in seven years (Stracey 1951). Gee (1952) mentions presence of 25 rhinos in Cooch Behar. Rao, in his inspection report, mentions rhino in Bhutri and Khairbari in 1954. Annual report of 1953-54 mentions 56 or more rhinos in Jaldapara. Report of 1954-55 shows presence in Barobisha and Balapara areas along Gholani River and probably only 3 (a male, a female and a calf) in Gorumara. But population was 5 as per the Report of 1955-56 and 4 as per the Report of 1956-57. Bist (1997) reports presence of rhinos in Buxa (Panbari and South Bholka blocks) before 1968. Annual Report of Wildlife Preservation in West Bengal for 1967-68 shows this species in Buxa Division. The Report mentions increase in Patlakhawa population. Presence in Nathua forests reported 1981. Last rhino in Patlakhawa (Cooch Behar) killed in 1985. In 1986, the population in Jaldapara again reduced to just 14. Considered an extinct species in Sundarbans (Ghosh, 1997). Blyth (1862) mentions it quite common in eastern Sundarbans and also in Rajmahal hills of Bengal (now in Bangladesh). In 1984, a large bone of a rhino collected at Bakkhali area of Sundarbans; doubted by ZSI to be the remains of *R. unicornis*. Common in Bangladesh Sundarbans till 1908 (Khan 1982). Presence of rhinoceros throughout north India reported up to 16th century (Rookmaaker 2002a). For genetic improvement, two rhinos procured from Guwahati Zoo and released one each in Gorumara and Jaldapara in fenced area.

### **Population**

Census figures 1964- 72, 1975- 23, 1978- 19, 1980- 32, 1985- 22, 1989- 39, 1992- 44, 1996- 57, 1998-75 (JWLS = 56, GNP = 19) and 2002 –84 in JWLS (27 male, 11 female, 2 unknown sex, 6 subadult male, 2 subadult female, 2 subadult unknown sex, 16 female with male calf, 4 female with female calf and 14 female with sex unknown calf) and 22 in GNP (6 male, 11 female and 5 calves).

### **The Wild Pig**

**(*Sus scrofa cristatus* Wagner, 1939)**

#### **Distribution : Past and Present**

Wild pigs are distributed in Darjeeling, Jalpaiguri, Cooch Behar, Malda, Birbhum, Murshidabad, Nadia, Bardwan, Bankura, Purulia and N & S 24-Parganas (Agrawal et al. 1992). Darjeeling and Jalpaiguri (Hunter 1876). 24- Parganas (De 1994). Dinajpur and Malda (Allen et al. 1993). In past, recorded from Malda, Murshidabad, Nadia and Midnapore also (Baker 1886). Bangladesh (Agrawal et al. 1992). Widely distributed in forests excepting very high mountains. O'Malley (1907) mentions occurrence up to 8000 ft. Sikkim (Avasthe and Jha 1999). Bhutan (Bahuguna pers. com.).

Wild pig has been reported from the areas of MWLS, GNP, JWLS, NVNP, SWLS, LWLS, HWLS, STR, BTR and CWLS (Respective Management Plans).

### **Status**

Very common in state and has relatively high abundance in Darjeeling and

Jalpaiguri. Causes extensive damage to crop in Darjeeling. O'Malley (1911) reports abundance in Midnapore. Bhattacharya et al. (1985) mention common in Purulia. Recorded from all districts but now restricted to Darjeeling, Jalpaiguri, Purulia, West Dinajpur and N. and S. 24- Prg. Common in hills and Sundarbans of Bangladesh (Khan 1982).

### **Population**

1989-2305; BTR in 1995-2600 and STR- 12000 (De, 1990). There are 200 to 225 in Wildlife Division-I, 250 to 280 in Wildlife Division-II (in GNP), 180 to 200 in Kurseong Division, 300 to 350 in Jalpaiguri Division and 15 to 20 wild boars in Baikunthpur Division according to Census figure of 2002. Report for 2001 of Department of Forest, Bangladesh mentions Sunderban population ranging from 20,000 to 25,000.

### **The Chital or Spotted Deer (*Axis axis axis* Erxleben, 1777)**

#### **Distribution**

Widely distributed in Bengal especially in Purulia, Birbhum and Nadia, N. & S 24- Parganas (Agrawal et al. 1992). 24- Parganas (De 1994). Malda (Sengupta 1969, Allen et al. 1993). Jalpaiguri (Gruning 1911). Bankura (O'Malley 1908). Midnapore (O'Malley 1911). Malda, Midnapore and Sundarbans, river Brahmaputra and Meghna forming eastern limit of range (Baker 1886). Occurrence of species has been recorded from Darjeeling (part) and Jalpaiguri districts and also Sundarbans. Sikkim and Bangladesh (Agrawal et al. 1992) and Bhutan (Avasthe and Jha 1999).

Species has been reported from most of the PAs excepting those in the higher altitude.

#### **Status**

O'Malley (1911) mentions large herds of cheetal existed 30 years ago and then became extinct in Midnapore. It was also found in Tura, Jhari, Talgheri and Dubrajpur under Raipur Police Station of Bankura district (O'Malley 1908, Mitra 1957). Annual Report of 1936-37 mentions the number of stags decreasing and that of doe increasing probably on account of shooting being restricted to grown up stags only. Presence of species also mentioned in Kalimpong Division (9th Working Plan, 1997-98 to 2017-18); now extinct there. Considered extinct in Purulia but reported by Sahoo (1991). Records of 1895, show it in Bholka and Alipurduar tehsils of Buxa forests only (Mitra 1951). In the beginning of twentieth century, restricted to west of Balasan River but a stray one has been known to cross to east (O'Malley 1907). Baker (1886) mentions presence in Sundarbans in abundance.

VII Working Plan of Jalpaiguri Division mentions Gorumara too thick for cheetal. Local people, in vicinity of Apalchand range of Baikunthpur Division, report about the presence of cheetal before seventies. Shooting of animal was banned in Jalpaiguri and Darjeeling districts (Anon 1954). In STR, large numbers of cheetal found in Chulkati, Mechua, Bagmara, and Narayantala areas (Chaudhuri and Chakraborty 1989). Naskar and Guha Bakshi (1987) estimated cheetal population of 1300 only in tribal shikaries in Sunderbans reported to throw foliage from trees to attract and hunt deer

(Paul 1984). Khan (1982) mentions common in Sundarbans and extinct in other areas of Bangladesh. Population in Bangladesh Sunderbans (East, South and West Sanctuary) recorded 1,00,000-1,50,000 (Anon 2001).

Became extinct in North Bengal forests and reappeared again as a result of reintroduction. Das (1966) shows 11 cheetal in Jaldapara in May 1964.

Reintroduced in regenerated forests of Bankura district with the active support of the local FPCs at Sutan, Joypur etc. and released in PAs of North Bengal from time to time. Now again seen in various sanctuaries of Jalpaiguri district. Species has been introduced/reintroduced in various PAs, Deer Parks, etc., exceeding 500 in number so far (Mallick pers. com.). Up to 2001-2002, about 100 more deer have been introduced. First introduction was undertaken after independence in 1954 in Mahatpur plantations of Nadia district. During flash floods in Bibhutibhusan WLS in N. 24- Parganas, more than hundred marooned deer could be rescued with the help of villagers.

### **Population**

Assessment in STR-30,000 (De 1990); BTR in 1995-480. Other PAs, Deer parks, etc.- c.2000 (Mallick pers. com.). 450 to 500 in Wildlife Division-I, 30 to 35 in Wildlife Division-II (in GNP), 8 to 10 in Baikunthpur Division, 350 to 400 in Jalpaiguri Division and 114 to 190 spotted deers in Cooch Behar Division according to Census figure of 2002.

### **The Hog Deer or Para (*Axis porcinus porcinus* Zimmermann, 1777)**

#### **Distribution**

Terai/Duars forests, particularly along big rivers. Jalpaiguri (Gruning 1911, Hunter 1876). Cooch Behar (Bhaduri 1966). Malda and Dinajpur (Baker 1886). Malda (Sengupta 1969, Lambourn 1918). 24- Parganas (De 1994). Sunderban forests (Calcutta Review, 1858 as per De, 1990). Bhutan (Shrestha 1997) are margin areas inhabited by the species. PAs reported to have species are BTR, MWLS, JWLS, GNP and CWLS (Agrawal et al. 1992). CWLS, GNP, JWLS and BTR (Respective Management Plans).

#### **Status**

Not common. Though population is not common but has shown general increase in trend one years, Barel in past records, Baker (1886) mentions so much abundance in Malda and Dinajpur that a shikari bagged a hundred in three days with two guns. O'Malley (1907) mentions formerly plentiful in Terai, but then became almost exterminated, partly owing to extension of cultivation in Terai and partly in consequence of prevalence of netting, in which old and young, buck and doe killed indiscriminately. Common till the beginning of twentieth century (Mitra 1951). Calcutta Review in 1858 recorded abundance of species in more open parts of Sunderban forests (De 1990). De also corroborates occurrence near human habitations in 24- Parganas. Possibly extinct species has been considered in Bangladesh (Khan 1982). Seidensticker and Hai (1983) believe that they are extinct in Bangladesh (Biswas and Mathur 2000).

## **Population**

1989-1459. In 1995 at BTR-110; 70 to 80 in Wildlife Division-I, 35 to 40 in Wildlife Division-II (in GNP); 2000 to 2500 in Cooch Behar Division according to Census figure of 2002. The Sambar (*Cervus unicolor niger* Blainville, 1816)

## **Distribution**

O'Malley (1907) mentions presence in Darjeeling hills up to 3000 ft. altitude. Species has also been reported from Darjeeling (Dash 1947, Hunter 1876) and Jalpaiguri (Gruning 1911). Bankura (Mitra 1957). Purulia (Bhattacharya et al. 1985). Midnapore (O'Malley 1911) and Bangladesh (Agrawal et al., 1992). Based on current distribution the species has been reported from MWLS, CWLS, GNP, JWLS, BTR and NVNP (Respective Management Plans).

## **Status**

The species in the state has been considered as rare (Agrawal et al. 1992). In Kalimpong Division, species is still seen in Lish, Churanti and Ramthi blocks of Chel range and from Tista Bridge to Coronation Bridge of Kalimpong Range (9th Working Plan, 1997-98 to 2017-18). Annual Report of 1936-37 mentions seeing in abundance in Tista Valley of Darjeeling district, Jalpaiguri, Buxa and Chittagong forests; Buxa showed tendency of population decline till 1932 and thereafter number started increasing. The species was considered as common till the beginning of twentieth century (Mitra 1951). O'Malley (1911) mentions sambar rare in Midnapore. According to Bhattacharya et al. (1985), the species is extinct in Purulia. Maharaja of Cooch Behar (1908) shot 259 sambar between 1871 and 1907. Rest House record of 1952 reveals that Dutta Mazumdar saw 15 hinds and 4 stags of sambar in Moraghat forest of Jalpaiguri. A.C. Gupta records a lot of poaching there as per his remarks in 1955 in the register. Hunting banned in Buxa for 2 years during 1950-52. In 1956 also, such ban imposed for a period of ten years in Jalpaiguri Division and parts of Cooch Behar Division (Madarihat Range and Nilpara and Chilapata forests to the west of Torsa river). Prior to 1970, plentiful numbers (Basbar et al. 2001). Restocking of species was done in Jaldapara in November 1996 by captive population from Manipur Zoo. Sambar was released in Arabari forests of Midnapore district in 1955 and in Bethuadari from Deer Park in Nadia district in 1969. Species is uncommon in Bangladesh (Khan 1982).

Population  
Present population of the species in the state is as follows. 1989- 533. In 1995 at BTR- 80; 60 to 70 in Wildlife Division-I, 25 to 30 in Wildlife Division-II (in GNP only), and 430 to 450 sambar in Cooch Behar Division according to Census figure of 2002.

## **The Barking deer or Muntjac (*Muntiacus muntjak vaginalis* Boddaert, 1785)**

### **Distribution**

Species has been reported from Darjeeling, Jalpaiguri, Midnapore and Purulia (Agrawal et al. 1992). Cooch Behar (Bhaduri 1966). Bankura (Roy

1987). Midnapore (O'Malley 1911), Purulia (Bhattacharyya et al. 1985). Baker (1886) and Gupta (1966) mention presence of species in Sundarbans. Sikkim, Bhutan and Bangladesh (Agrawal et al. 1992). Sanyal (1892) mentions absence of species from Lower Bengal. Khan (1982) mentions that the species is found in hills and Sundarbans of Bangladesh.

Present distribution indicates the presence of species from NVNP, CWLS, BTR, SWLS, JWLS, GNP, MWLS, RmnWLS and STR (Respective Management Plans).

### **Status**

Though the species is not common but presently, widely distributed in the forests of Jalpaiguri and Darjeeling and rarely in Sundarbans (Halliday and Bulchery Islands). Present at Sundarbans (Mandal and Nandi 1989) at the fag end of 19th Century but now almost extinct from this part (Ghosh 1997). Annual Report of 1936-37 mentions common in Darjeeling district and Buxa forests. In Buxa, showed tendency of extinction till 1932 and thereafter the number started increasing. Roy (1987) considers it as elusive species in a few deep wooded forests of Ajodhya and Bandwan in Purulia, Banspahari in Midnapore and Ranibandh in Bankura. Hoof marks of species have recently been found in HWLS (Das and Nandi 1999, De 1990). Species have been seen in forests of Kalimpong Division from foothill to an altitude of 2340m in upper hills (9th Working Plan, 1997-98 to 2017-18). First introduced at Mahatpur plantations of Nadia district in 1954, then at BthWLS in 1969, in RmnWLS in 1978 and lastly at Dow Hill Deer Park, Kurseong.

### **Population**

1989- 1404; BTR in 1995-920; 200 to 250 in Wildlife Division-I, 55 to 60 in Wildlife Division-II (in GNP), 170 to 190 in Kurseong Division, 45 to 50 in Jalpaiguri Division and 190 to 210 barking deer in Cooch Behar Division according to Census figure of 2002.

### **The Gaur or Indian Bison (*Bos gaurus gaurus* H. Smith)**

### **Distribution**

Terai Duars (Mitra 1957, Dutt-Mazumdar 1955). Darjeeling (Dash 1947) and Jalpaiguri (Gruning 1911). Midnapore (Sanyal 1892, Sterndale 1982). Midnapore and Bankura (Baker 1886). Birbhum (Ghosh et al. 1992). Bangladesh (Agrawal et al. 1992). Sikkim (Avasthe and Jha 1999). Bhutan (Anon 2003a).

### **Status**

Annual report of 1936-37 mentions 30-40 in Upper Tondu forests of Jalpaiguri, 50 in Buxa forests and 100 in Chittagong forests. Schaller (1998) mentions that about 15 gaurs in Jaldapara and a few stragglers in Sukna forest (MWLS). As per 9th Working Plan of Kalimpong Division (1997-98 to 2017-18), found in middle and upper hills forests of Kalimpong Sub-division, particularly in eastern portion. Three such herds have been located in Mo, Thosum and Rechila blocks and seen to climb up to an altitude of 2590 m or more very fast on steep terrains having even 100% slope



Maharaja of Cooch Behar (1908) shot 48 bisons between 1871 and 1907. Its shooting was banned in Jalpaiguri and Darjeeling districts (Anon 1954).

Now found in Jalpaiguri only. Gaur have been shot even in Midnapore and Bankura also (Baker 1886). Probably rare in the beginning of the twentieth century as there was appeal for protecting bison along with Sumatran and Indian rhino (R.M.G. 1932). A study done in 1981 by Archaeological Department of University of Delhi from Bahiri, a Chalcolithic-cum-Iron Age Site in Birbhum district of West Bengal. It revealed presence of *Bos gaurus* and this strengthens the idea that Birbhum area had thick forests in those days (Ghosh et al. 1992). Sterndale (1982) mentions of suitable gaur habitat near Midnapore. Extinct in Bangladesh (Khan 1982), Sundarbans (Ghosh 1992, Gupta 1966). Bhutan (Anon 2003a). Bangladesh (Khan 1982).

### Population

1997- 1055 plus (JWLS- 225, GNP+CWLS- 315, MWLS- 65, and BTR- 450). There were 15 to 20 in Wildlife Division-I, 350 to 380 in Wildlife Division-II (in GNP), 14 to 18 in Kurseong Division, 55 to 60 in Jalpaiguri Division and 450 to 500 in Cooch Behar Division according to Census figure of 2002.

### Present Habitats (PAs)

NVNP, BTR, MWLS, JWLS, GNP and CWLS (Agrawal et al. 1992). MWLS, GNP, JWLS, BTR, NVNP and CWLS (Respective Management Plans).

<b>ABBREVIATIONS</b>	
bWLS	Bibhuti Bhushan Wildlife Sanctuary
BlpWLS	Ballavpur Wildlife Sanctuary
BthWLS	Bethuadahari Wildlife Sanctuary
BTR Buxa	Tiger Reserve
CWLS	Chapramari Wildlife Sanctuary
GNP	Gorumara National Park
hrs	hours
HWLS	Halliday Island Wildlife Sanctuary
JWLS	Jaldapara Wildlife Sanctuary
L.R.P.	Lateral Road project (part of highway from Siliguri to Binnaguri along the foothill)
LWLS	Lothian Island Wildlife Sanctuary
MWLS	Mahananda Wildlife Sanctuary
NVNP	Neora Valley National Park
NWLS	Narendrapur Wildlife Sanctuary
PNHZP	Padmaja Naidu Himalayan Zoological Park, Darjeeling or Darjeeling Zoo
RWLS	Raiganj Wildlife Sanctuary
RmnWLS	Ramnabagan Wildlife Sanctuary
SjWLS	Sajnakhali Wildlife Sanctuary
SLDRC	Salt Lake Deer Research Centre

SNP	Singalila National Park
SWLS	Senchal Wildlife Sanctuary.

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Bhutan believes the tri-junction is at a place called Doka La, which is located in the middle of the Doklam plateau. Doka La is a pass in the Sikkim sector, which is guarded by the Indian Army. The corridor extends from the Darjeeling, Jalpaiguri and Terai areas of West Bengal towards the North East. The region is important for trade, commerce and tourism for West Bengal, Sikkim, Assam, Nepal, Bhutan and Bangladesh. All land trade between the North East and the rest of the country happens through this corridor. The corridor is the hub of a rail and road network connecting West Bengal and the rest of India to the North East, including Assam, Nagaland and Sikkim. The Capital of West Bengal is located on the east bank of the River Hoogly (traditionally known as the Ganga) in Eastern India. The region has been inhabited for over two millennia and Kolkata is a vibrant city filled with breathtaking, historical architecture, traditional markets, and the legendary Bengali hospitality. The nucleus of the Bengal Renaissance is a hotbed of drama, art, film, theatre, and literature. Bhutan is like nothing else on earth – from the people walking around with orange teeth to the highest unclimbed mountains in the world, the images of male genitalia prominently displayed on every surface and a very real commitment to conservation and remarkably feminist culture – you may never feel quite so much a true traveler again. West Bengal is a state in the eastern region of India along the Bay of Bengal. With over 91 million inhabitants, it is the fourth-most populous state and the fourteenth-largest state by area in India. Covering an area of 88,752 km<sup>2</sup> (34,267 sq mi), it is also the seventh-most populous country subdivision of the world. Part of the Bengal region of the Indian subcontinent, it borders Bangladesh in the east, and Nepal and Bhutan in the north. It also borders the Indian states of Odisha, Jharkhand, Bihar... PDF | On May 1, 2004, N.C. Bahuguna and others published Ungulates of West Bengal and its adjoining areas including Sikkim, Bhutan and Bangladesh | Find, read and cite all the research you need on ResearchGate. Site in Birbhum district of West Bengal. It revealed presence of *Bos gaurus*. and this strengthens the idea that Birbhum area had thick forests in those days (Ghosh et al. 1992). Sterndale (1982) mentions of suitable gaur.