

## Short Communication

### A NOTE ON SEROW, *NEMORHAEDUS SUMATRAENSIS* (BECHSTEIN, 1799) IN DARJEELING DISTRICT, WEST BENGAL, INDIA

Darjeeling district lies in the northern part of west Bengal between 26°33' - 27°13' N and 88°2' - 88°56' E with a geographical area of 3148 km<sup>2</sup> approximately. The Darjeeling district falls on Sub- Himalayan region, extended over on elevation of 50 to 3800 m. About 20% of the total geographical areas is under good forest and 10% open forests.



Fig. 1. Serow (*Nemorhaedus sumatraensis*) at Senchal (West Range)

The survey of Darjeeling district was initiated to study the population trend of Serow (Fig-1). Serow belongs to order Artiodactyla under family Bovidae. It is somewhat larger than a goat in size and positioned intermediate between goat and antelopes (Alfred *et al.*, 2006). It is a hilly-forest dwelling antelope and found in the Himalayas both in eastern and western parts (Kathayat and Mathur, 2002). Serow is now a days confined in three reserve forests of this district *viz.* Senchal Wildlife Sanctuary; Neora valley National Park and Singalila National Park. The elevation of these

three forested areas ranges from 305 m to 2130 m, though Serow lives mainly at an elevation of 500m 4000 m but it was sighted at lower elevation at Senchal.

Two field trips were carried out during 2011-2012 but the sighting of Serows presented here is based on 2012 survey when the entire accessible habitats of Serow was covered. No definite samplings technique were adopted as the study areas were hilly and Serow preferred to live under thick vegetation cover in gorges and undulating habitats. However, random sampling was made in the survey for locating the Serows, as it is an accepted standard method of assessing biotic diversity in a given area (Heywood & Watson, 1995). Mechanical aids that were used in the survey were binocular, digital camera and GPS.

#### Senchal Wildlife Sanctuary

The total area of the sanctuary is 38.60 km<sup>2</sup> and is situated between 457 and 793 m. A total of 6 Serows were recorded in this forest (T-1). Entire habitable area of this sanctuary was surveyed and a total of 9 observation was made. Indirect evidence of the species like pellets, skulls and different parts of body of the Serow was found in this sanctuary.

#### Neora Valley National Park

The geographical area of this park is about 88 km<sup>2</sup> and elevation is 305 m approximately. The park represents tropical, sub-tropical, temperate and sub temperate forests which is a great wealth of biodiversity of eastern Himalayas. Some of

the flora and fauna of this park has similarities with that of Palearctic region of the adjacent geographic zone. 5 Serows were recorded from this park with 9 observation (T-1). A number of times the habitable areas of Serow was surveyed in this park.

### Sigalila National Park

It is situated in the higher elevation at about 2134 m spreading over 76.6 km<sup>2</sup>. Only 4 Serows were noticed in this park in 5 observation. Though good vegetation cover and ideal habitats were present in this park, Serow population is very poor here.



Fig. 2. Survey party in search of Serow at Singalila National Park

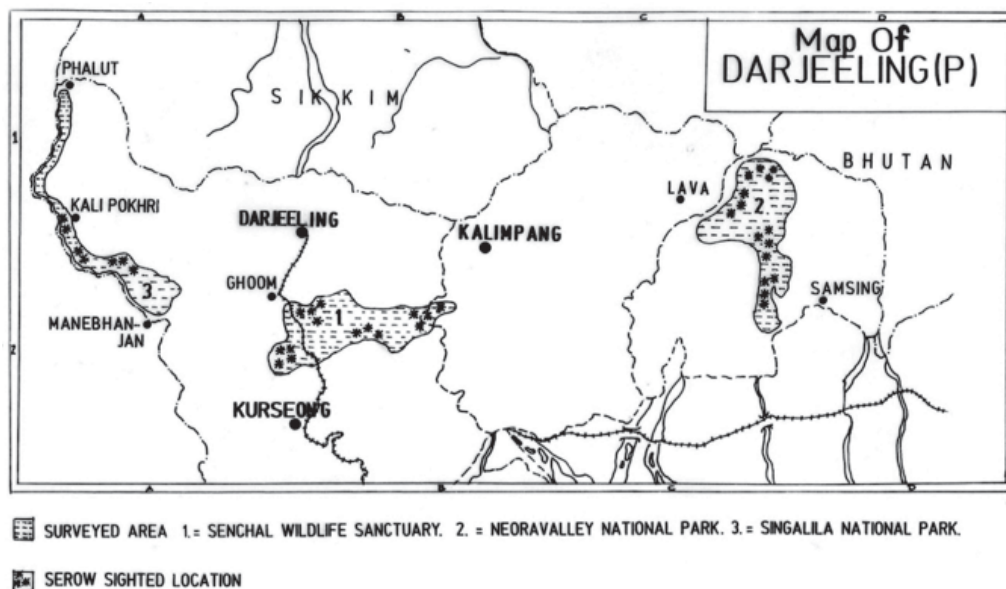


Table-1. Serows sighted in the Sanctuary and National Parks of Darjeeling district.

Sanctuary/ National park	Habitat	Latitude / Longitude	Individual animal sighted	Total Nos.of observation	
Neora Valley N. Park	Hilly terrain with vegetation	27°05' N 88° 42' E 27°07' N 88° 46' E 27°04' N 88° 42' E 27°07' N 88° 43' E	5	9	
Sigalila N. Park	Hilly terrain with vegetation	27°02' N 88° 01' E 27°02' N 88° 04' E 27°01' N 88° 07' E 27°01' N 88° 03' E	4	5	
Senchal W.L. Sanctuary	Hilly terrain with vegetation	26°59.614' N 88° 18.166' E 26°59.598' N 88° 18.88' E 26°59.852' N 88° 18.212' E 26°59.538' N 88° 18.222' E 26°59.850' N 88° 18.261' E 26°59.542' N 88° 18.230' E	6	9	
Total			15	23	

### CONCLUSION

A total of 110 hours were spent in field survey and 15 Serows were sighted. Indirect evidence like pellets that found in all the sanctuaries revealed that the number of Serows were more. Inaccessible terrain (Fig. 2) with thick vegetation cover made the sighting of animals difficult. Serows normally come out from the place of night stay in early morning and minimum disturbance cause their disappearance in steep slopes or in the thick vegetation. The habitat of all the surveyed areas have great similarity with that of steep hilly terrain but Singalila is higher than the other two forests. The Senchal Wildlife Sanctuary is more ideal habitat for the Serow in comparison to other forests. More number of Serow (6 Nos.) and large quantity of pellets at many places even carcasses suggest that Senchal Wildlife Sanctuary provides better food and shelter.

All the forests described in this report are highly infiltrated by the local people for collection

of firewood and forest produce. Tourist Bungalows are situated in the forests and tourist pressure is more throughout the year except rainy season. So, anthropogenic pressure is one of the main threats for Serow in these forests. Although Serows live in hilly forests but it also found in grassland in all these forests here. It likes to eat leaves and shoots but feeding on grass was noticed at number of times. Goral, a small antelope goat is occupying the same niche along with the Serow in these forests. Interspecific competition along with habitat loss, small grazing areas are the causes of population depletion of antelopes in these reserve forests.

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