

POBITORA WILD LIFE SANCTUARY

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Pobitora Wildlife Sanctuary is located in the floodplains of the Brahmaputra river further downstream of Kaziranga National Park. It is situated within the civil district of Lakhimpur where an area of 1584.76 hectares forest land has been designated as Reserve Forest. This reserve forest proved a suitable homeland for rhino and its population showed a considerable increase. The land area was extended to 1584.76 hectares from earlier 1584.76 hectares and the whole area was declared as Pobitora Wildlife Sanctuary vide a proclamation but for non-publication of the final notification by the Government of Assam as yet only 1584.76 ha area is under present management of Pobitora Wildlife Sanctuary.

Objectives of the study

- To know details about the habitat.
- To know the population of rhino and their habitat in different season.
- To know about other animals of the sanctuary.
- To know about various management obstacles.

Method of the study

The sanctuary area has been demarked into five different blocks to facilitate carrying on the proposed intensive study. The blocks are Haduk, Tamulidova, Solmari, Pagladova, and Noltoli.

The blocks were monitored on foot from January 1997 to April 1997 on a network arrangement. The study was conducted blockwise during 10 days of exclusive work on averagely completing a block. This entire period of study was included in 100 days of total study periods.

The study revealed that there had been an almost equal distribution of rhino in four blocks namely Tamulidova, Solmari, Haduk and Noltoli during the month of January and distribution was almost static to 2nd week of February. After that there came concentration only in Tamulidova, Solmari and Noltoli blocks. The number of animals in Noltoli block was increasing during the entire study period even in the night. But it is observed that 6-8 rhinos very often start out from the sanctuary through Noltoli block towards Pokoria Duboritoli at night. Similarly 8-10 rhinos stray out from the sanctuary through Tamulidova Block towards Diprang during the months from March to April.

While carrying out the study quite a large number of livestock from the adjacent villager was observed grazing inside the sanctuary. They normally came inside the sanctuary at 7.00 a.m. and went out between 4.00 and 4.30 p.m. The villages engaged in illegal livestock grazing activities are Murobori, Sildubi, Kasuani, Morisulipam, Kholabhuyan, and Kuri Kukuari, Nekera habi and Nekera.

The stock inside the sanctuary in our study days were counted to know the intensity. Details are given in Annex- I.

On 22nd April 1997 we have carried out the actual census works with the existing staff of Pobitora Wildlife Sanctuary. The staff, having accompanied the census works for last two census exercises of 1993 and 1995, had a great deal of experience in Rhino census. The day before the actual census, all the five blocks were demarked with red flags to avoid overlapping. The details of the census are given in Annex- II.

During census seventy-six rhinos were counted in the sanctuary. There may be a human error of +/-2 in course of any entire study, however. Other notable animals sighted were wildboar, large Indian civet, small Indian civet, leopard, fishing cat, jungle cat, jackal, Indian fox, Indian otter, rufous-tailed hare, monocetele cobra, Indian Python, Indo-gangetic flapshelled turtle, Indian-eyed turtle, Tricarinate hill turtle, and Indian turtle.

Earlier census carried out in the year 1995 showed the population of Rhino as 68 with 11:28:3 adult 3:1:3 subadult and 9 calf. In between the 1995 census and present census, 11 rhinos died. Despite such loss the population of Rhino in Pobitora is noticeably on an increase.

From the successive census figures it is observed that the large number of rhino have been recorded in the Tamulidova block. The population density of rhino in the sanctuary is worked out to be 1 (one) rhino for every 29.34 ha. in 1987, 28.30 ha. in 93, 23.30 ha. in 1995 and 20.85 ha. in 1997.

The sanctuary area can be conveniently divided into three district categories, e.g. 1) tree forests, 2) grass lands and 3) water bodies. During the survey carried out in the year 1993-94 it was found that 13.09% of the total area of the sanctuary was covered by tree forests consisting of mainly *Albizia procera*, *Bombax ceaba*, *Lagerstroemia flosreginae* etc. 72.25% by grass lands consists of mainly *Imperata cylindrica*, *Phragmites karka*, *Saecharum munja*, and 14.66% by the water bodies consists primarily of *Monochoria hestata*, *Hygroryza aristata*, *Euryale ferox*, *Eichomia crassipes*, etc. The water bodies includes all the natural and artificial lakes, canals, water logged areas.

The percentage of tree forest area is more in Haduk and Solmari block while the percentage of grass land is more in Pagladova, Tamulidova and Noltoli blocks. The water bodies are sporadically distributed all over the sanctuary. During this study it is observed that the percentage of tree forests is also increasing in the sanctuary due to profuse regeneration of *Albizia procera*.

From 19-21st January 1997 the writer has carried out a waterfowl census in five major wetlands inside the sanctuary. The members of Green Guard Nature Club of Nagaon had extended their assistance while doing the counting. Count of birds was 55,553 of 36 species, which is said to be the high-

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est count of the last decade. This year we have also sighted black stork, white necked, stork, white bellied heron, red necked grebe and white ibis during waterfowl counts. Steps have been taken to update the checklist of birds of Pobitora Wildlife Sanctuary and the list is supposed to be completed at the end of this year. The writer has sighted one hundred ninety (190) species of birds of 45 families from November 1996 to June 1997 so far.

Findings

(a) Due to continuous siltation inside the sanctuary area all the wetlands become dry during the months of December to April every year, narrowing down the available water resources in the sanctuary. As a result, migration of waterfowl to the sanctuary is considerably reduced and such fall of water resources also harms the rhino population. During this season most of the rhino go out of the sanctuary for search of water resources to the adjacent cultivated areas.

(b) The profuse regeneration of *Albizia procera* appears to have caused diminution of grass lands. The seeds of *Albizia* disperse in all the blocks during the flood season and propagate in almost all the blocks. The percentage is high in Haduk, Solmari and new patches of tree lands are coming up in Tamulidova and Pagladova blocks.

(c) Out of a total 70% of the grass land area, around 30% area have been degraded due to overgrazing of livestock. In major parts of Noltoli and Pagladova blocks the grass height is found to reduce to 25 to 30 cms. Due to the above-mentioned reason the rhinos of Pobitora Wildlife Sanctuary preferred to stay in the rest of the tree blocks during the study period and at night quite a good number of rhino strayed out from the sanctuary in search of food to the adjacent areas.

(d) An average 536 individual of live stock grazed inside the sanctuary area during winter season. The number of herbivorous animal including rhinos and feral buffaloes became 638. During rhino census 26 feral buffalo were counted inside the sanctuary. Therefore, the population density of herbivorous animals in the sanctuary for one animal become only 2.48 ha.

Recommendation

(a) The major wetlands i.e. Pagladova, Tamulidova, Lamladova, Dholibeel, Sarudova, Tuplung jan, Kukuarinala need to be dug and high lands to be raised and there for shelter of animals during high flood season.

(b) The departmental census may be taken up with the existing staff to confirm the nature of habitat preference by rhino during different parts of the year. Such census should be done at every three months interval at least for three continuous years. It will also help in combating the poaching activity inside the sanctuary as well.

(c) The final notification indicated in this report should be brought out at the earliest possible time showing inclusion of the rest ha. area in the sanctuary.

(d) Conversion of woodlands to original state by opening the canopy in a selective way is to be ensured.

(e) Translocation at least 15 rhinoceros (5:10) to other habitat of Assam is imperative for comfortable growth and living of the animal in the sanctuary. It will also help in general viability of rhino in other rhino habitat.

(f) A boundary trench should be dug out from north-east to south-west direction with the specification of 1.2mt x 1.2mt with 10ml. long transverse trenches. The earthen mounds along the trenches should be planted with trees and shrubs. This will not only reduce the livestock grazing problem but also reduce the stray activity of rhinoceros from the sanctuary. The trenches can also be utilized for pisciculture at nominal cost.

(g) A departmental pound should be started in the sanctuary immediately with a special power to auction the livestock inside the sanctuary to minimise the menace of unauthorised grazing.

Annex I
Livestock inside the Pobitora Sanctuary

S/L Blocks	1	2	3	4	5	6	7	8	9	10	Total / %
1. Haduk	33	21	7	13	9	19	16	11	9	16	154/15.40
2. Noltoli	231	119	173	126	219	243	238	192	228	242	2011/201.10
3. Tamulidova	23	18	16	29	9	17	11	7	15	8	53/15.30
4. Pagla Dova	362	241	280	287	333	317	389	402	212	208	3031/303.10
5. Solmari	7	2	0	2	0	0	5	3	0	0	19/1.90