

Table 2: Scenario of human-carnivore conflict in Bangladesh in the last two decades

Year	No. of carnivore species involved	Total no. of incidents	No. of humans killed	No. of humans injured	No. of carnivores killed	No. of carnivores injured	No. of carnivores rescued
2010	8	39	22	7	12	7	7
2005	3	6	2	0	2	0	4
2000	4	20	13	12	9	0	7
1995	1	8	9	1	0	0	0
1990	2	11	22	4	3	0	1
Grand Total	8	84	68	24	26	7	19

ELUSIVE BEAUTIES OF MANAS NATIONAL PARK - THE SWAMP DEER

by Amit Sharma, Deba K. Dutta and Anindya Swargowary

The Swamp deer (or Barasingha) (*Cervus duvauceli ranjitsinhii*) was once widely distributed in its preferred habitats in the Brahmaputra valley. However, habitat disturbances, anthropogenic pressures and many other associated reasons have now confined the species to two protected areas of Assam. Kaziranga National Park has a healthy population numbering about 1,169 individuals (2011-12), while the population in Manas National Park (MNP) is quite small and its existence was confirmed only recently and is now presented here. A study conducted by Aaranyak (2009) could not document the direct observation of the species, but found numerous evidences that suggested that a small population of around 12 to 16 individuals in a single herd exists in the Chorpuli area of the park. This study marks the first indication of the species surviving the days of civil unrest in the area.

Manas National Park is located in the north-eastern part of India, with an area of about 500 km². It forms the core of the Manas Tiger Reserve which was declared among the first batch of tiger reserves in 1973 and is also a UNESCO World Heritage Site. This park is rich in biodiversity and has unique natural beauty. It shares its northern boundary with Bhutan, extending the natural habitat for its wildlife through the Royal Manas National Park further north. Prior to the civil unrest period during the mid 1990s, MNP had a healthy population of the Eastern barasingha species in the park. It has been noted that the park had a population of more than 500 individuals in 1987 that grew from less than 150 in 1973 (DebRoy, 1991).

Table 1: Recent swamp deer records from Manas National Park

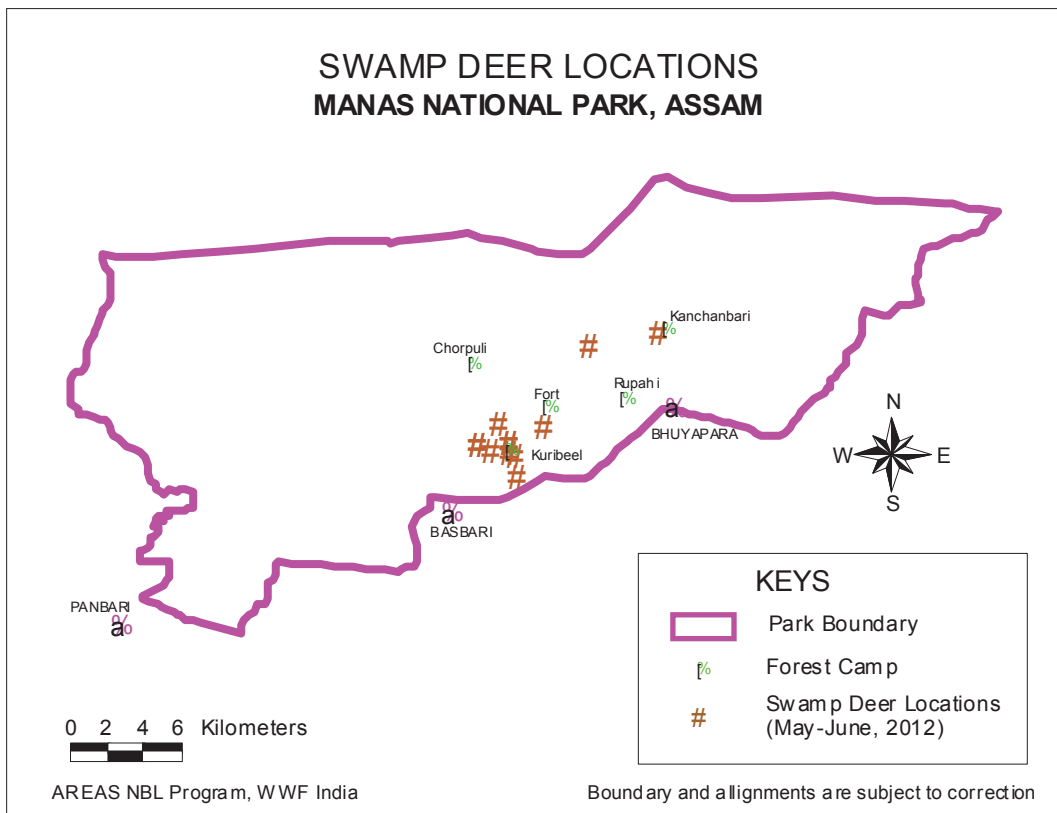
Sl No	Location	Range	Time	Date	Size	Vegetation
1	Kuribeel	Basbari	7-30am	1st May 12	2	Mixed grass dominated by <i>Saccharum</i> spp.
2	Fort	Basbari	6-00am	5th May 12	2	Mixed grass dominated by <i>Saccharum</i> spp.
3	Kuribeel	Basbari	5-00am	7th May 12	1	Mixed grass dominated by <i>Imperata</i>
4	Kuribeel	Basbari	7-30am	7th May 12	1	Mixed grass dominated by <i>Imperata</i>
5	Kuribeel	Basbari	7-00am	17th May 12	1	Mixed grass dominated by <i>Imperata</i>
6	Kuribeel	Basbari	5-00am	23rd May 12	2	Mixed grass dominated by <i>Imperata</i>
7	Kuribeel	Basbari	5-00am	24th May 12	1	Mixed
8	Kuribeel	Basbari	6-00am	29th May 12	2	Mixed with <i>Hymensia assamica</i> & <i>Lexondria</i>
9	Dura beel	Bhuyapara	5-00pm	2nd June 12	1	Swamp
10	Kanchanbari	Bhuyapara	3-27pm	5th June 12	3	Mixed grass dominated by <i>Saccharum</i> spp.
11	Buraburijhar	Basbari	7-00am	15th June 12	5	Mixed grass dominated by <i>Saccharum</i> spp.
14	Kuribeel	Basbari	7-00am	18th June 12	2	Mixed grass dominated by <i>Imperata</i>

Indications of the existence of swamp deer were very encouraging for the park staff and all involved in its revival. Concerted efforts were made to confirm their presence by documenting sightings, but none of these were successful, even though there were regular reports of hearing calls and of sightings during the early morning and late afternoon /evening in and around Kuribeel. The rut calls heard by the staff of the park were confirmed to be of swamp deer by Dr. Bivash

Pandav of WII during his visit to the park in May 2009.

Under Indian Rhino Vision (IRV) 2020, rhinos were translocated to the park in 2008 and since then dedicated teams carry out round the clock monitoring of the rhinos in the park. This has greatly helped to improve the security in the park and also helped in the systematic documentation of wildlife in the park in addition to the rhinos.

Map 1: Recent Swamp Deer sightings in Manas NP



The first direct evidence of the existence of swamp deer in the park was recorded by the rhino monitoring team led by Mr Deba Dutta of WWF-India, when they came across a predator kill on 19th March 2010 in the Kuribeel area in the central part of the park under Basbari range. Following this, the team came across a pair (male-female) in the same area on 12th April 2010 at about 6.30am. The efforts were slowly showing results and since photography was difficult in the thick vegetation, the team even tried setting up one pair of camera traps in the areas where the species

was observed for about ten nights during 2011, but this also yielded no positive results. The chance encounters continued and in 2012 things brightened up with success in obtaining photographic evidences. From the encounters and records during 2012, the presence of the species in small herds could be confirmed in at least four locations of the park viz. - Kuribeel and Fort areas under Basbari and Kancharbari and Durabeel (north of Rupahi) areas under Bhuyapara. It is assumed that in all these locations small herds of about 6 to 10 exist, but during clear

*Plate 2: At Kanchanbari**Plate 1: At Durabeel**Plate 2: At Kanchanbari*

sightings counts could be made of only 1-5 animals; the largest sighted group of 5 was made in the Kuribeel area. The sightings of fawns in two locations confirmed that the present population

is breeding in Manas. It is difficult to come up with a population figure for the park with the present information; however, 20 seems to be a reliable estimate.

The confirmation of the existence of swamp deer is very encouraging news for the park and management plans are needed for its revival and expansion. One immediate need is to undertake a systematic study in the entire park, as there is a possibility of the species occupying many other areas of the park as their suitable habitats are spread all around; this may help to get a more accurate estimate of the population.

The recent sightings were possible due to a bit of grassland management and it is suggested that similar efforts are continued; wetland management should also be undertaken that will help the herbivores in the park.

The existing small populations should be given an adequate chance for protected breeding and population enhancement, perhaps following the Kanha model and adapting it to the local needs.

Highlighting the importance of this species to Manas National Park, UNESCO has already advised for the development of a Species Recovery Plan for the Swamp Deer of MNP. The Forest Department at the State and the Central levels has already initiated plans to work for the recovery of the species in association with other organizations and it is necessary that an appropriate plan suited to the needs of the species in MNP is drawn up based on scientific inputs and implemented in a timely manner. Team work and multi-partner collaboration through the IRV2020 program has greatly benefitted the rhino population in Manas NP and similar efforts could result in a successful revival of the swamp deer in Manas as well.

Enhanced protection has helped in the revival of the park wildlife and recent common sightings of the elusive swamp deer is a clear indicator of this. The park soldiers (frontline staff), park management and the Government are all doing their best to bring back the glory of Assam. NGOs and other organizations are providing all possible support to this movement and community support is also in place. What is needed now is to sustain these efforts for a better future for the magnificent Manas.

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