

# TIGER PREDATION OF RHINO CALVES AT KAZIRANGA NATIONAL PARK, ASSAM

by Bibhab Kumar Talukdar

Kaziranga National Park in Assam, covering an area of 473.71 km<sup>2</sup>, lies between latitudes 26°30' and 26°45' N and longitudes 93°40' and 93°50' E. Kaziranga was notified first as a reserved forest in 1908, with an area of 228.83 km<sup>2</sup>, and later declared a game reserve in 1916, with an area of 277.65 km<sup>2</sup>. In 1950, Kaziranga was declared a wildlife sanctuary and in 1974 it was finally upgraded to a national park with a total area of 429.93 km<sup>2</sup>. Kaziranga National Park is one of the key areas for the conservation of the endangered Great Indian one-horned rhino (*Rhinoceros unicornis*), along with other threatened species such as the Royal Bengal tiger (*Panthera tigris*) and the Asian elephant (*Elephas maximus*). The current status of the

rhino in Kaziranga National Park and other rhino-bearing areas, along with the threats from poachers, has been described by Talukdar (2000).

There has been a series of discussions throughout the rhino's distribution range about threats to rhinos from poachers and habitat alterations, but information or literature related to carnivore predation on rhino is not available. Commonly, tigers are known for their predation on herbivores other than rhinos, but in Kaziranga National Park, the Royal Bengal tiger preyed upon 203 rhino calves between 1985-2000.

Table 1: Tiger predation of rhino in Kaziranga National Park

Year	Number of rhinos killed by tigers
1985	11
1986	14
1987	10
1988	18
1989	11
1990	12
1991	18
1992	14
1993	17
1994	12
1995	12
1996	11
1997	9
1998	11
1999	14
2000	9
<b>Total</b>	<b>203</b>

Kaziranga has four ranges, namely the western range known as Baguri, the central range known as Kohora, the eastern range known as Agaratoli and the Burapahar range. Rhino concentration has been found to be higher in Baguri, followed by Kohora, Agaratoli and Burapahar. Tiger predation on rhinos is more frequent in Baguri compared to Kohora, comparatively less in

Agaratoli and negligible in Burapahar. This is probably because there are less rhinos present in Agaratoli and Burapahar compared to Kohora and Baguri. The rhino census conducted in Kaziranga National Park in 1999 recorded 1,551 rhinos: 738 (47.55%) in the Baguri range, 687 (44.26%) in Kohora, 112 (7.22%) in Agaratoli and 14 (0.90%) in Burapahar.

**Table 2: Range-wise tiger predation on rhinos in Kaziranga National Park**

Range	Number of rhinos killed by tigers										
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Baguri	5	8	7	12	7	9	10	8	7	3	6
Kohora	5	6	3	5	4	2	6	2	6	9	5
Agaratoli	1	0	0	1	0	0	2	4	3	0	1
Burapahar	0	0	0	0	0	1	0	0	1	0	0

Tiger is one of the dominant carnivores in Kaziranga National Park and its population is stated to be 80 as per the tiger census carried out

in 1997. The tiger population in the park estimated in previous years along with its possible prey species is given in Table 3.

**Table 3: Estimates of tiger and its possible prey population in Kaziranga National Park**

Year	Tiger	Swamp deer	Hog deer	Sambar	Rhino	Wild buffalo	Wild boar
1966	20	213	1,311	120	366	471	155
1972	30	516	4,551	105	658	555	522
1978	40	697	6,855	215	939	610	733
1984	52	756	9,872	158	946	677	1,645
1991	50	635	2,911	55	1,129	1,090	555
1993	72	427	2,048	35	1,164	1,034	140
1999	80	398	5,045	58	1,552	1,192	431

The data revealed that the population of tiger is on the increase in Kaziranga, while the populations of its prey species, mainly three species of deer, are on the decrease, although

marginal recovery of hog deer and sambar could be observed in 1999. The deer population in Kaziranga received a severe blow during the high floods in 1988, especially the hog deer and

sambar. The population of swamp deer has also followed the declining trend (Talukdar, 1999). The same is the case with the wild boar, whose population was reduced by almost 60% between 1984 and 1991, mainly due to the floods in 1988. However, the population of wild boar decreased further in 1993, which recorded only 140 animals. It may be assumed that after the flood of 1988, tigers might have preyed more upon wild boar as the deer population had yet to recover and stabilize. Similarly, the floods of 1998 also resulted in the drowning of 39 rhinos, 7 elephants, 1 bear, over 600 hog deer, 23 wild buffalos, 15 sambar, 22 wild boar, 9 porcupines and other smaller mammals and reptiles. The flood havoc in Kaziranga National Park during 1998 was described earlier by Choudhury (1998).

The reason behind the predation of rhino calves by tiger is not yet fully known. But it is obvious that with the rhino being a herbivore the tiger has no problem preying upon it, especially the calves which may be easier to kill if separated from the mother rhino. Most of the rhino calves killed by tigers are below the age of 12 months. Many conservation workers are of the opinion that the rhino calf meat is a delicacy and that may be one of the reasons why the tiger targets it. The loss of 203 rhino calves to tiger predation over the past 16 years is a cause for concern, especially for an endangered species like *Rhinoceros unicornis*. However, there is little that park authorities can do in this matter. What they can do, however, is ensure that there are less casualties to herbivores in future floods in Kaziranga by creating more high lands within the national park and also allowing the smooth migration of herbivores from the low-lying areas to the hills of Karbi-Anglong, crossing the

national highway in the southern part of the park.

## References

- Choudhury, A. 1998. **Flood Havoc in Kaziranga.** *Pachyderm* 26:83-87.
- Talukdar, B.K. 1999. **Status of Swamp Deer in Kaziranga National Park.** *Deer Specialist Group News* 15:5-6.
- Talukdar, B.K. 2000. **The current state of rhino in Assam and threats in the 21st Century.** *Pachyderm* 29:39-47.

## Acknowledgements

*The author is grateful to Mr. D.M. Singh, Director, Kaziranga National Park, Mr. P.S. Das, DFO-Eastern Assam Wildlife Division and the staff of Kaziranga National Park for their cooperation and support. The author also appreciates the support offered by Mr. Nilam Bora at KNP, Prof. P.C. Bhattacharjee, Dr. Rathin Barman, Dr. Hillal Jyoti Singha, Md. Firoz Ahmed, Mr. Bibhuti Prasad Lahkar, Mr. Rajib Rudra Tariang, Mr. Steve Galster of Wild Aid, Bangkok, Ms. Melanie Shepherd, Director, The David Shepherd Conservation Foundation, U.K., Mr. Ashok Kumar and Vivek Menon of the Wildlife Trust of India.*

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