

Spatial relationship between mother-calf of *Rhinoceros unicornis* in a predator dominated landscape, Kaziranga National Park, Assam, India

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ABSTRACT

Spatial distance preserved by the calf around the mother can be regarded as the life secured strategy against potential predators. The present study of spatial relationship between mother and calf of great Indian rhinoceros *Rhinoceros unicornis* was carried out during 2016-2018 in Kaziranga National Park of Assam, India. Spatial distance, approach/follow/leave behaviours and major cause of calf death were the main objectives of the study. Photographic technique and range finder was used to measure the distance opportunistically along the road side and near major water holes. Data were collected using Scan animal sampling. The calves were divided into three age groups- 0-1 year, 1-2 years and 2-3 years. Each age group showed different spatial distance requirement which was found to be statistically significant. The distance increased gradually from the first group to the third group with the increase in age. Moreover, leave behaviors was found more in first group of calf and approach was higher among second calf group. First and second calf group prefer the range of 0-5 meter distance around the mother, whereas the third group prefer 5.1-10 meter range. This range around the mother was found to be secure for the calf survival. The occurrence of calf following mother was found higher than mother following calves. Tiger kill of rhino calf was found to be the major threat in Kaziranga National Park. Male rhino calves were more vulnerable than the female calf, which indicates the use of larger territory and stray behaviour of the males.

Key words: Great Indian rhinoceros *Rhinoceros unicornis*, Kaziranga National Park, mother-calf relationship, mortality, flood, spatial distance, survival strategy, tiger kill.