

The general behavior of White rhinoceros (*Ceratotherium simum*) in semi-natural conditions at Chiang Mai Night Safari Zoo

Waraporn Matlaim and Sawat Sanitjan

Department of Biology, Faculty of Science, Chiang Mai University, Chiang Mai, 50200, Thailand

E-mail address: Coffeeteamilkk@gmail.com

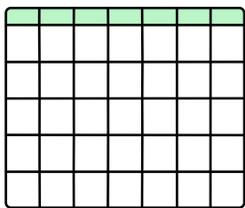
ABSTRACT

This study investigates the behavior of the white rhinoceros (*Ceratotherium simum*) in a semi-natural environment at the Chiang Mai Night Safari, Chiang Mai Province, from August to November 2024. Two white rhinoceroses were observed: one male and one female. The focal-sampling method was employed to observe their behaviors every 5 minutes between 10:00 AM and 5:00 PM. The results revealed that the most common behavior exhibited by the white rhinoceroses was feeding, accounting for 37.9% of observations. This was followed by resting (30.1%), standing (24.3%), moving (2.5%), defecating (1.6%), self-grooming (1.6%), and rubbing their horns (1.2%). An analysis of the behaviors exhibited at different times of the day revealed that the rhinoceroses engaged in resting behavior most frequently between 11:00 AM and 1:00 PM, which correlated with the increase in temperature (average temperature of 30.72°C). Additionally, during the times of 10:00 AM (average temperature 28.33°C) and 4:00 PM (average temperature 30.75°C), the rhinoceroses displayed the most diverse behaviors. Furthermore, the study found behavioral differences between the two individuals. The male rhinoceros displayed behaviors such as wallowing in mud, digging, and charging at the enclosure gate, whereas the female rhinoceros did not exhibit these behaviors.

INTRODUCTION

The white rhinoceros (*Ceratotherium simum*) is one of the largest land mammals, second only to the elephant, and is endangered due to poaching for its horn. The white rhinoceros is divided into two subspecies: the northern white rhino and the southern white rhino, with the southern subspecies having the largest population. Due to habitat issues, white rhinos are often kept in semi-natural conditions in zoos, which may affect their natural behavior. In this study of white rhino behavior in semi-natural conditions, observations were made at Chiang Mai Night Safari, where one male and one female rhino were housed in separate enclosures. This presented a good opportunity to compare the behavior of both sexes. The observations may help assess whether the rhinos' behavior is similar to their natural behavior and also serve as an indicator of the quality of the environment within the enclosures. If the environment is of high quality, it will allow the animals to exhibit natural behaviors.

MATERIALS AND METHODS



Design a Data Recording Table with the following details: Date, Time, Individual Behavior, Location



♂ Horn

♀ Korya

Recorded by focal-sampling method for 7 hours/day, for 4 months. Totaling 84 hours



Analyzed data by using Excel program

RESULTS

Figure1. Percentage Distribution of White Rhinoceros Behavioral Frequency

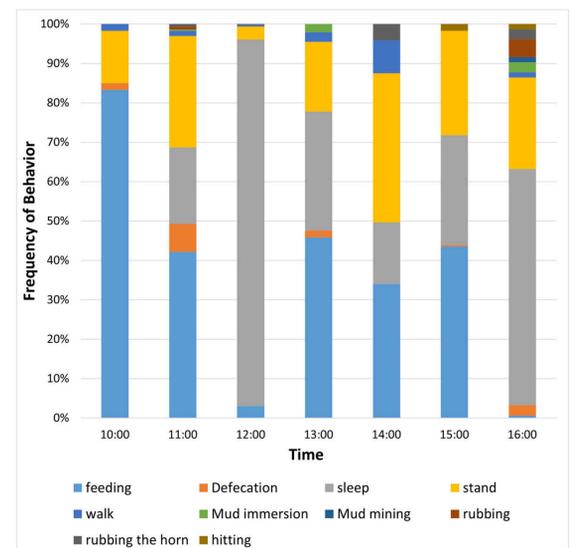
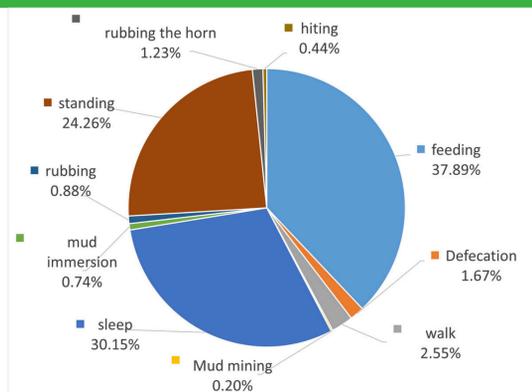
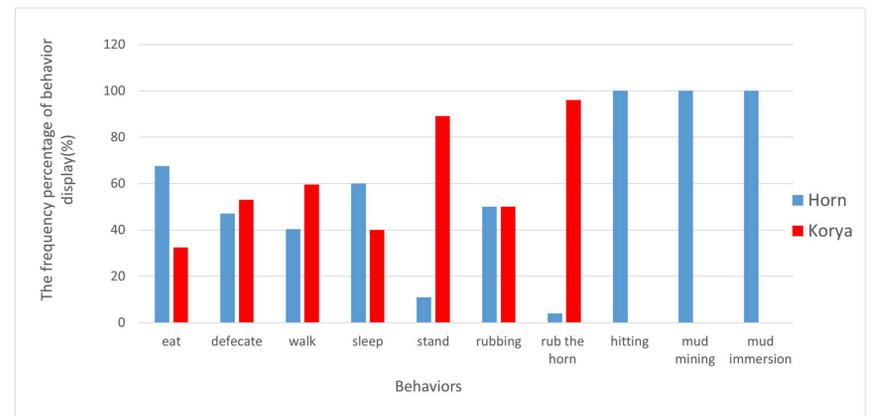


Figure2. Percentage Frequency of All White Rhinoceros Behaviors across Time Intervals

Figure3. The frequency percentage of behavior between the two sexes of white rhinoceros



CONCLUSION

A study of white rhino behavior in semi-natural conditions at Chiang Mai Night Safari from August to November 2024 found that the most common behaviors were resting, feeding, moving, defecating, and interacting, respectively (Figure 1). Resting and feeding were most frequent due to abundant resources provided by staff. The rhinos rested most between 11:00 AM and 1:00 PM, coinciding with the highest temperature (30.72°C). The rhinos showed the greatest variety of behaviors at 10:00 AM and 4:00 PM (Figure 2). Additionally, the male rhino exhibited mud immersion, mining, and hitting behaviors, while the female did not (Figure 3).

ACKNOWLEDGMENT

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