30 prosiding.pdf
Feb 15, 2022
1932 words / 10115 characters

Bainah Sari Dewi

Daily Behavior of Sambar Deer (Cervus unicolor) in Captive Deer...

Sources Overview

3%

OVERALL SIMILARITY

1	mafiadoc.com INTERNET	1%
2	media.neliti.com INTERNET	<1%
3	nexusacademicpublishers.com INTERNET	<1%
4	A Mardiastuti. " Urban Park Design for Bird Diversity: ", IOP Conference Series: Earth and Environmental Science, 2020 CROSSREF	<1%

Excluded search repositories:

None

Excluded from document:

Bibliography
Quotes

Excluded sources:

www.forda-mof.org, internet, 96%
repository.lppm.unila.ac.id, internet, 15%
id.123dok.com, internet, 14%
Institut Pertanian Bogor on 2019-04-20, submitted works, 3%
123dok.com, internet, 3%
A Mardiastuti. "Bird community changes across gradient of habitat quality in the urban green open space", IOP Conference Series: Earth and Environmental Science, 2019, crossref, 0%

Paper Presented at The International Conference of Indonesia Forestry Researchers III 3rd INAFOR 2015
Bogor, 21-22 October 2015

POSTER A25 - Daily Behavior of Sambar Deer (Cervus unicolor) in Captive Deer Lampung University

Bainah Sari Dewi[1]

[1]Forestry Department of Agriculture Faculty, Lampung University
Jl. Prof. Dr. Soemantri Brojonegoro No. 1, Gedong Meneng, Bandar Lampung, INDONESIA 35145
Corresponding Email: bainahsariwicaksono@yahoo.com

ABSTRACT

University of Lampung (Unila) has a captive area inside of campus, which holds six captive deers managed by Unila and BKSDA Lampung. Daily behavior is one indicator to determine deer health of captivated Sambar deer. This paper identifies the daily behavior of Sambar deer (Cervus unicolor) in deer captive Unila. The method used was Focal Animal Sampling from September to December, 2014. Results show that the deer behavior of moving has a greater proportion than the total of the others. Percentage movement of the deer is as follows: (1). Lingga (eating 28.80%, moving 39.06% and resting 32.14%), (2). Farida (32.25%; 38.84% and 28.81%), (3). Farid; (29.56%, 40.20% and 30.24%), (4). Bimo (29.65%, 40.48% and 29.87%), (5). Agung (28.39%, 41.46%, and 30.15%), (6). Danang (35.63%, 37.18%, and 27.19%). Majority, the behavior of captivated deer in Unila is approximately similar with those of wild deers. *Visitors existence shows no significant influence in the daily behavior of Sambar deer in Unila.* It is necessary to do more research about nocturnal or diurnal behavior of Sambar deer in Unila.

Keywords: Daily behavior, Sambar deer, *Cervus unicolor,* conservation

1. INTRODUCTION

Sambar deer *(Cervus unicolor)* is the largest deer population in the tropics area. In Indonesia the deer is spreaded throughout large and small islands, such Sumatera, Borneo, Papua, East Nusa Tenggara, West Nusa Tenggara and small islands around Sumatera (Whitehead, 1994). Based on the IUCN red list issued in 2007, Sambar deer is in Lower Risk/Least Concern status and belongs to the species protected by the Indonesian government and listed in Appendix I of CITES. *Therefore,* their presence must be maintained and not allowed to be hunted especially in meat trade (Whitehead, 1994).
One of the wildlife conservation efforts in providing protection from hunting in nature is the presence of deer at the University of Lampung (Harianto & Dewi, 2012). Deer behaves in general are eating, resting and moving (Semiadi, 1993). Other activities of deer habitat, besides eating and resting are walking, self caring, fawn caring, breeding, fighting and running. One of the activities often seen is related to the breeding behavior in adult males are fight, either with other males and honing horn in the tree (Lelono, 2003). The difference in the characteristics of deer habitat in nature and in captivity can influence the behavior of these wild animals. Therefore it is necessary to study the daily behavior of Sambar deer in captivity at Lampung University. This paper analyzes the daily behavior of deers in the deer captive at Lampung University, Lampung.

2. RESEARCH METHOD

This study was conducted in deer captive at Lampung University for four months, on September 13 to December 13, 2014. Tools and materials used are stationery, tally sheet, camera and watch. The object of research are six Sambar deers (*Cervus unicolor*) consists of five males (Lingga, Farid, Bimo, Agung, Danang) and a female (Farida) in captivity, University of Lampung. The research used the Focal Animals Sampling method within the observed behaviour: eating, resting and moving.

3. RESULT AND DISCUSSION

Sambar deers are commonly found in the forest area of Borneo and Sumatera. The actual population of sambar *deers are* unknown and are expected to be in endangered status because it is often hunted by the people for meat and other body parts (Afzalani, Muttalib, & Musnandar, 2008). Sambar deer *(Cervus unicolor)* population is currently decreasing, then the deer is need to be preserved. One of the efforts to preserve the sambar is by performing continuous wildlife conservation both in-situ and ex-situ (Sita & Aunurohim, 2013).
One of these conservation efforts is conducted by Ex-situ activity of *deer* in Lampung University which began since 2004 until now on. The purpose of deer captivity at Lampung University was to assist the government program in protecting the wildlife. The total individual of deer in the Lampung University are currently six deers and known as Lingga (male), Farid (male), Farida (Female), Bimo (male), Agung (male) and Danang (male). Sambar Deers as wild animals need food, water, shelter, and specific spaces (Alikodra, 2010, Dewi, 2009). Vegetation for feeding, water and some vegetation meetings as protection. The suitable habitat for deer consists of shrubs, trees and the different type of coverage (Kartono, Santosa, Darusman, & Thohari, 2008).

Deer breeding conditions at the University of Lampung is fairly well because of the water resources availability such as pools, and vegetation for feed consists of teak (*Tectona grandis*), ketapang (*Terminalia catappa*) and the bush species. Ek-situ habitat conditions can affect the behavior of the deer because of the interaction between them. So the research of sambar daily behavior has been done. The daily behavior of Sambar deer analysis result's are described in Table 1.

Table 1: Analysis of behavior observation of Sambar deer (*Cervus unicolor*) in deer captive Lampung University 13 September to December 14, 2014

Deer name	**Percentage of Average Activity For Research (%)**			**Total (%)**
Rest		**Eating**	**Move**	
Lingga	32,14	28,80	39,06	100
Farid	30,24	29,56	40,20	100
Farida	28,81	32,25	38,84	100
Bimo	29,87	29,65	40,48	100
Agung	30,15	28,39	41,46	100
Danang	27,19	35,63	37,18	100

Based on the analysis, behavioural change which is most often done by sambar deer in captivity is moving followed by eating and resting respectively. Results of the daily behavior analysis in Bali Barat National Park by Masy'ud, Wijaya and Santoso (2007) was Sambar deer.

used time allocation most largely for the activity of ingestion or eating and drinking (52.05%) as the main activity to gain more energy followed by resting (30.61%), moving (6.12%). Comparative analysis of eating behavior and move described in Figure 1.

Figure 1: Comparative analysis of the behavior of rest, eat and move on research in captivity sambar (Cervusunicolor) 13 September sd December 14, 2014

Sambar deer is naturally live in open grassland areas, which has proven from the behavior of deer like making bushes reeds area as a resting place in the morning. In the afternoon start at 11:30 pm, this animal prefers moving to grassland adjacent to the pool. This happens because during the daytime, the temperature increases, then the deer need to cool off their body temperature, usually they will wade in the pond. In addition, to lower the body temperature, wallowing also serves as body cleansing of impurities. Activity breaks usually done as an activity that intersperse feeding activity, which is done by lying under a tree, bush or forest while This activity is also conducted to shade and as shelter from the hot sun during the day, to maintain a stable body temperature (Masy'ud, Wijaya & Santoso, 2007). According to Giles and Hoogerwerf (1970) making the deer woods and shrubs as a place of rest and places rich in water with gentle topography and dense undergrowth as a breeding ground.

Deer in Lampung University is solitary foraging. These animals prefer to eat in solitary than groups to avoid the competition and the absence of wild-threatening predator. Sambar also prefers to digest young grass for more effective use of energy. Young grass contains more vitamins, proteins, minerals that are good for the metabolism compared to old grass (more fiber and less vitamins and protein) (Harianto & Dewi, 2012). Deer feeding time is twice a day, respectively at 07.30 pm and 04.00 pm.

Masy'ud, Wijaya and Santoso (2007) mentioned that the male and female Timor deer conducting ingestive activity (eating and drinking) more in the morning and afternoon. Apart from food supplied by the officer, deer usually obtain food that grows in breeding cage such as; sedges (*Cyperus rotundus*), elephant grass (*Pennisetum purpureum*), Leucaena (*Leucaena leucocephala*), grass thatch and leaves given by visitors who want to see the deer. Sambar deers are given five kinds of food at Surabaya Zoo including elephant grass (*Pennisetum purpureum*), banana (*Musa* sp.), beans (*Vigna sinensis*), sweet potato (*Ipomoea batatas*) and carrot (*Daucus carota*) (Sita & Aunurohim, 2013). Meanwhile, in Southeast Asian according to Stafford (1977), sambar deer that live in the jungle eat leaves, fruits, grass and bark including pine bark.

Moving behavior is the most often seen activity of sambar deer in deer captive Unila, Deer showing moving behaviors in between some interval during deer feeding. Deer usually move around to look for other feed. Deer is also moving around when looking for a shady spot to rest or while avoiding other deer in the enclosure. Deer that live in the wild is moving to roam their habitat. Home range (range area) is an area regularly visited by wildlife as supplying food, drinks. As well as having a primary function as a shelter or hide, the bed and mating (Alikodra, 1990).

4. CONCLUSION

Based on the results of the analysis time of 104 hours (6240 minutes) observation Captive Deer stag at Lampung University obtained the proportion of daily behavior, which are: (1). Lingga: Eating 40.10%; Moving 28.03%; and Rest of 31.88%; (2). Farida: Eating 37.35%; Moving 30.54%; and Rest of 31.11%; (3). Farid: Eating 38.58%; Moving 29.04%; and Rest of 32.38%; (4). Bimo: Eating 44.97%; Moving 22.49%; and Rest of 32.54%; (5). Agung: Eating 38.52%; Moving 23.07%; and Rest of 38.41%; (6). Danang: Eating 38.13%; Moving 27.45%; and Rest of 34.42%. in deer captive Unila, captive deer has similar behavior with wild deer, with moving behavior as its dominant proportion. The existence of the visitors do not have any significant effect in the daily behavior of sambar in Unila. In conclusion, it is needed to do more research on the behavior of nocturnal or diurnal sambar in Unila.

REFERENCES

Alikodra. (1990). *Pengelolaan satwa liar. (Jilid 1). Bogor: IPB Press.*

Afzalani R.A., Muthalib, & Musnandar, E. (2008). Preferensi pakan, tingkah laku makan dan kebutuhan nutrien Rusa Sambar (Cervus unicolor) dalam Usaha Penangkaran di Provinsi Jambi. *Jurnal Media Peternakan, 31*(2), page-page.

Giles, & Hoogerwerf, R. (1970). Wildlife Management. Virginia Polytechnic Institute and State University : United States of America.

Harianto, S.P., & Dewi, B.S. (2012). *Pemahaman Konservasi Bagi Penerus Bangsa: Penangkaran Rusa Universitas Lampung.* Unila: Lembaga Penelitian Universitas Lampung. Bandar Lampung.

Kartono, A.P., Santosa, Y., Darusman, D., & Thohari, A.M. (2008). Penentuan kuota buru dan introduksi populasi rusa sambar untuk menjamin perburuan lestari. *Jurnal Media Konservasi, 13*(2).

Lelono, A. (2003). Pola Aktivitas Harian Individual Rusa (Cervus timorensis) dalam Penangkaran. *Jurnal Ilmu Dasar, 4*(1), 48-53.

Masy'ud, Wijaya, & Santoso. (2007). Pola Distribusi, Populasi Dan Aktivitas Harian Rusa Timor (Cervus timorensis, de Blainville 1822) Di Taman Nasional Bali Barat. *Jurnal Media Konservasi, 12*(3).

Sita,V., & Aunurohim. (2013). Tingkah Laku Makan Rusa Sambar (Cervus unicolor) dalam Konservasi Ex-situ di Kebun Binatang Surabaya. *Jurnal sains dan seni Pomits*, *12*(1).

Stafford, K.J. (1977). The diet and trace element status ofsambar deer (*Cervus unicolor*) in Manawatu district, New Zealand. *NZ J Zool, 24*, 261 – 271.

Semiadi, G., Muir, P.D., & Barry, T. N. Veltman. (1993). Grazing Patterns 0f Sambar Deer (CervusUnicolor) and Red Deer (CervusElaphus) in Captivity. *New Zealand. Journal of Agricultural Research, 36*, 253-260.

Whitehead, G.K. (1994). *Ancylopedia of deer*. Swann Hill Press: Shewsbury