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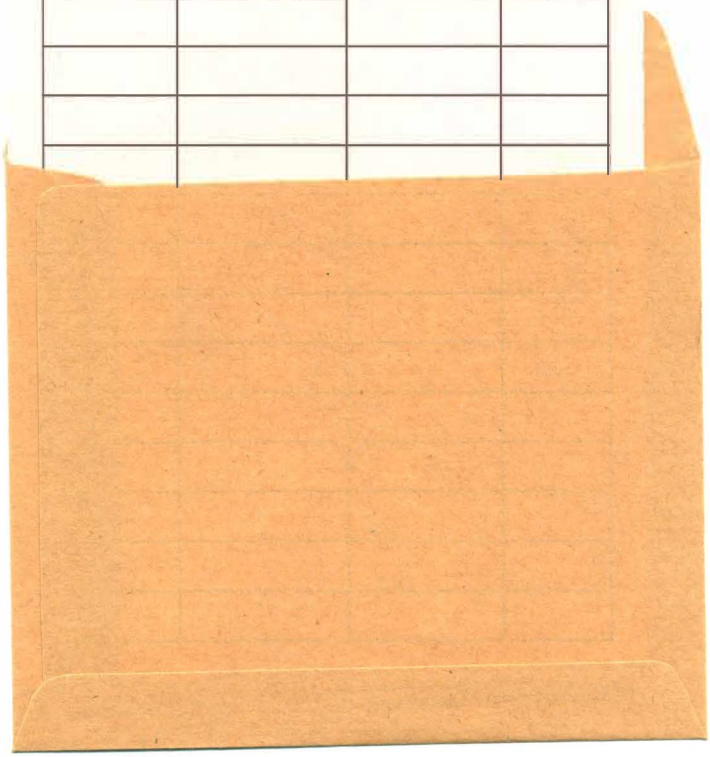

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Ethological study on the diurnal and nocturnal activities of spotted deer (Axis axis axis) in captivity at Malacca Zoo (Zoo Melaka) / Noor Baizura Ariffin.

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ETHOLOGICAL STUDY ON THE DIURNAL AND NOCTURNAL ACTIVITIES OF SPOTTED DEER (*Axis axis axis*) IN CAPTIVITY AT MALACCA ZOO (ZOO MELAKA)

By

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Research Report submitted in partial fulfillment of
the requirements for the degree of
Bachelor of Science (Biological Sciences)

Department of Biological Sciences
Faculty of Science and Technology
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JABATAN SAINS BIOLOGI
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PENGAKUAN DAN PENGESAHAN LAPORAN
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Adalah dengan ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

ETHOLOGICAL STUDY ON THE DIURNAL AND NOCTURNAL ACTIVITIES OF SPOTTED DEER (*Axis axis axis*) IN CAPTIVITY AT MALACCA ZOO

Oleh Noor Baizura Binti Ariffin, No. Matrik UK 5515 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains – Sains Biologi, Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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.....Specially dedicated to my mom, dad and brothers.....Also my friends Ina, Rose, Kak mas and Kak Ani.....Love you all forever.....

-ZURA-

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ABSTRACT

The behavior of axis deer (*Axis axis axis*) in captivity had been studied to compare the behavior of captive deer and the wild axis deer. The study was carried out over 21 days, which comprise 252 hours with seven days before it for the pilot observation. The data for distribution of this deer around the enclosure had been collected to see the distribution of this deer for the whole day. The enclosure was divided into five parts and the position of the subjects were noted every 30 second. Generally, deer finished the day at plot C where the pellet was available and they have their food. 18.27 % was spent at plot A (front area), 24.27% at plot B (food area), 31.99% at plot C (food and moist area), 22.12% at plot D (mid and highest area) and only 3.36% at plot E (back area) at $p > 0.05$. The focused of study was the comparison of five types of behavior that were feeding, chewing, resting, moving and social interaction. Statistical analysis showed that there was a significant difference between the percentages of all behavior. 16.35% was spent for feeding, chewing 21.45%, resting 32.47%, moving 18.43% and social interaction 11.31% at $p < 0.05$. Total result detected that axis deer in captivity had changed their natural behavior. Otherwise, they still maintain their sensitive nature and still very alert of any changes that occurred around.

ABSTRAK

Satu kajian tentang perlakuan rusa bintik (*Axis axis axis*) telah dibuat bagi membandingkan perlakuan rusa di dalam kurungan dan juga rusa yang hidup liar. Kajian ini telah dijalankan selama 21 hari yang merangkumi 252 jam dengan tambahan tujuh hari pemerhatian awal. Data tentang taburan rusa di sekeliling kandang telah diambil untuk melihat taburan rusa ini setiap hari. Kawasan kandang telah dibahagikan kepada 5 bahagian dan kedudukan rusa dicatatkan bagi setiap 30 saat. Rusa didapati banyak menghabiskan masa di plot C yang mana merupakan kawasan yang merangkumi tempat perletakan makanan. Sebanyak 18.27% dihabiskan di plot A (kawasan depan), 24.27% di plot B (kawasan makanan), 31.99% di plot C (kawasan makanan dan lembap), 22.12% di plot D (kawasan tengah dan agak tinggi) dan hanya 3.36% di plot E (kawasan belakang) pada kebarangkalian $p>0.05$. Tumpuan utama kajian ini adalah terhadap perbandingan lima jenis perlakuan rusa bintik iaitu makan, mengunyah, berehat, bergerak dan juga berinteraksi antara satu sama lain. Analisis statistik menunjukkan terdapat perbezaan yang signifikan antara peratus perlakuan rusa tersebut. 16.35% diperuntukkan untuk makan, mengunyah 21.45%, berehat 32.47%, bergerak 18.43% dan berinteraksi antara satu sama lain sebanyak 11.31% ($p<0.05$). Hasil keseluruhan kajian mendapati, perlakuan rusa bintik di dalam kandang telah banyak berbeza daripada perlakuan asal mereka. Namun, sifat asal rusa yang amat sensitif dan terlalu berwaspada dengan keadaan sekeliling masih seperti sediakala.