

DAILY BEHAVIOUR OF ESTUARINE CROCODILE  
(*Crocodylus porosus*, Schneider 1801) IN  
SEMI-NATURAL ENCLOSURE AT SARANG BUAYA  
PASIR GUDANG, JOHOR, MALAYSIA

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SCHOOL OF MARINE SCIENCE AND ENVIRONMENT  
UNIVERSITI MALAYSIA TERENGGANU

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(*Crocodylus porosus*, Schneider 1801) IN SEMI-NATURAL  
ENCLOSURE AT SARANG BUAYA PASIR GUDANG,  
JOHOR, MALAYSIA**

**By**

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**Research Report submitted in partial fulfilment of  
the requirements for the degree of  
Bachelor of Science (Marine Biology)**

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**SCHOOL OF MARINE SCIENCE AND ENVIRONMENT  
UNIVERSITI MALAYSIA TERENGGANU**

**DECLARATION AND VERIFICATION REPORT  
FINAL YEAR RESEARCH PROJECT**

It is hereby declared and verified that this research report entitled **Daily Behaviour of Estuarine Crocodile (*Crocodylus porosus*, Schneider 1801) in Semi-Natural Enclosure at Sarang Buaya Pasir Gudang, Johor, Malaysia** by **Dana Raj a/l Shanmugam**, Matric No. **UK25811** have been examined and all errors identified have been corrected. This report is submitted to the School of Marine Science and Environment as partial fulfillment towards obtaining the Degree **Bachelor of Science (Marine Biology)**, School of Marine Science and Environment, Universiti Malaysia Terengganu.

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## LIST OF ABBREVIATIONS

m	-	Meter
M	-	Morning
A	-	Afternoon
E	-	Evening
°C	-	Degree Celcius
%	-	Percentage
SF	-	Scar Face
WC	-	Without Contact
AO	-	Approaching Others
OA	-	Others Approaching
KG	-	Kilogram

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## ABSTRACT

This study was conducted at Sarang Buaya Estuarine Crocodile Sanctuary, beginning from July 10, 2013 to August 08, 2013. The aim of this study was to observe, record and determine the pattern of daily behaviour of estuarine crocodile (*Crocodylus porosus*) in semi-natural enclosure. Focal animal sampling was used on a 3.3 meter crocodile known as Scar Face (SF). During the study period 12 crocodilian behaviours were observed from SF. The duration data and frequency data showed a similar pattern in SF behaviour hence, the duration was used to compare the behaviours. Diving ( $p < 0.019$ ) and floating ( $p < 0.008$ ) were the dominant behaviour observed for the entire sampling period and they were significantly different among morning, afternoon and evening. When the behaviours grouped according to social interaction (Without Contact, Approaching Others and Others Approaching) swimming ( $p < 0.046$ ) was significantly different in morning. Diving ( $p < 0.01$ ) and floating ( $p < 0.01$ ) was significantly different in the afternoon and biting ( $p < 0.039$ ) was significantly different in the evening. However there were no significant differences in the behaviour when they are compared against the weather conditions (Sunny, Cloudy, Raining, and Thunderstorm) in the same session. The behaviour of SF during the same weather condition in all social interactions but at different sessions was also compared. Raining with temperature  $< 30^{\circ}\text{C}$  showed no significance difference during different sessions. Hence, this proves that SF is not influenced by changes in weather conditions but by changes in sessions and social interactions.

**PERILAKU HARIAN BUAYA TEMBAGA (*Crocodylus Porosus*, Schneider  
1801) DI KAWASAN TERTUTUP SEPARA SEMULAJADI DI SARANG  
BUAYA PASIR GUDANG, JOHOR**

**ABSTRAK**

Kajian ini telah dijalankan di Sarang Buaya Santuari Pasir Gudang, Johor dari July 10, 2013 hingga Ogos 10, 2013. Tujuan kajian ini adalah untuk memerhati, merekod dan mengenalpasti corak perilaku buaya tembaga di kawasan tertutup separa semulajadi. Kaedah penyempelan haiwan tertumpu digunakan atas seekor buaya berukuran 3.3 meter panjang yang dikenali sebagai Scar Face (SF). Sepanjang kajian ini dijalankan 12 perilaku buaya ini dapat direkodkan dari SF. Data tempoh masa dan kekerapan perilaku menunjukkan, corak perilaku buaya yang sama, maka tempoh masa sahaja digunakan untuk membezakan perilaku buaya. Menyelam ( $p < 0.019$ ) dan terapung ( $p < 0.008$ ) merupakan perilaku yang dominant ditunjukkan sepanjang tempoh kajian dan kedua-dua perilaku ini berbeza dari pagi, tengahari dan petang. Apabila perilaku buaya di kategorikan mengikut interaksi social (Tanpa Gangguan, Menghampiri Lain dan Lain-lain Menghampiri) berenang ( $p < 0.046$ ) menunjukkan perbezaan signifikansi di waktu pagi. Menyelam ( $p < 0.01$ ) dan terapung ( $p < 0.01$ ) menunjukkan perbezaan signifikansi apabila dibandingkan dengan interaksi social di waktu tengahari. Perilakuan mengigit ( $p < 0.036$ ) menunjukkan perbezaan signifikansi pada waktu petang. Manakala, tiada perbezaan signifikansi apabila keadaan cuaca (Cerah, Mendung, Hujan, dan Ribut Petir) yang berbeza dari sesi yang sama dibandingkan.



Hujan dengan suhu  $<30^{\circ}\text{C}$  tidak menunjukkan sebarang perbezaan signifikasi semasa sesi yang berbeza. Maka ini membuktikan perilaku SF tidak dipengaruhi oleh perubahan cuaca tetapi oleh perubahan sesi dan interaksi social.