

ANT PREDATION ON GREEN TURTLE NESTS AND HATCHLINGS AT
CHAGAR HUTANG, REDANG ISLAND

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2011

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Ant predation on green turtle nests and hatchlings at Chagar Hutang, Redang Island / Randymiller Marcus.

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**ANT PREDATION ON GREEN TURTLE NESTS AND HATCHLINGS AT
CHAGAR HUTANG, REDANG ISLAND**

By

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

**Department of Marine Science
Faculty of Maritime Studies and Marine Science
UNIVERSITI MALAYSIA TERENGGANU
2011**

This project report should be cited as:

Randymiller, M., 2011. Ant Predation on Green Turtle Nests and Hatchlings at Chagar Hutang, Redang Island. Undergraduate thesis, Bachelor of Science in Marine Biology, Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu, Terengganu. 70p.

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**DEPARTMENT OF MARINE SCIENCE
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**DECLARATION AND VERIFICATION REPORT
FINAL YEAR RESEARCH PROJECT**

It is hereby declared and verified that this research report entitled:

The Ant Predation on Green Turtle Nests and Hatchlings in Chagar Hutang, Redang Island by Randymiller Marcus, Matric No. **UK 18178** have been examined and all errors identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfillment towards obtaining the degree of **Bachelor of Science (Marine Biology)**, Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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ACKNOWLEDGMENTS

Thank to God, had given me a chance to finish my thesis. I would like to express my sincere gratitude to my advisor Dr. Juanita Joseph for the continuous support of my study and research, for her patience, motivation, enthusiasm, and immense knowledge; and also a full gratitude to Assoc. Prof. Liew Hock Chark for his advised and support. They guidance had helped me in completing my research and writing of this thesis. Besides my advisor, I would also like to thank to Dr. Nor Antonina Abdullah and Dr. Siti Aishah Abdullah for their kind heart and motivation. My great thanks goes to SEATRU staff; Man, Mahadi, and Mizi, and not forgetting Uzair, Lionel and Yana. To my researches partners; Nor Azri Shah B. Norhan, Faezah Noor Bt. Basir and Vicki Chew Yii Ching, thank you for all the support, ideas and comment during my research and writing of this thesis. Sincere thanks to Laguna Redang Resort for sponsoring my trip to Chagar Hutang. I would like to thank all my friends, for always be there hearing my problem and always help me release my stress with their jokes. Last but not the least; I would like to thank my family: my parents Marcus Sakiah and Rusime Kulipang, for giving birth to me in the first place, and supporting me spiritually throughout my life, and for my siblings, thank you for the support you all give to me. Thank you.

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LIST OF ACRONYMS

IUCN	World Conservation Union
FAO	Food and Agriculture Organization
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DoF	Department of Fisheries
WWF	World Wildlife Fund
SEATRU	Sea Turtle Research Unit
UMT	Universiti Malaysia Terengganu

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ABSTRACT

In recent year, the hatching success of green turtles nest in Chagar Hutang had decreasing due to the high predation incidences by ant. From the first study of ant predation on turtle nest in Chagar Hutang in 2004 by Mr. Morita, the predation was become serious; it will lower the production of hatchling. Certainly, urgent study is needed in order to overcome the problem of ants at Chagar Hutang, Redang Island. In every, sea turtles conservation the main objective is to increase the hatching success of sea turtle nests so that it can replenish the depleted sea turtle population. Sampling was conducted from August to October 2010. Ant species were collected during nest check and preserved in 75% alcohol for species identification. A total of 60 food traps were set up on the vegetation area of Chagar Hutang in order to observe the effect of Optigard® ant gel bait on ant predation incidences. There were two ants' species; *Dorylus* sp and *Pheidologeton* sp was identified attacked green turtles nest in Chagar Hutang. Both ants were also observed attracted to the food trap. The ant predation rate during the study period was 35.0 % and most of the predation was on turtle eggs. Chagar Hutang was divided into 35 sectors, from east to west by SEATRU. Ants were present on most of the food trap in sector 0 to 26, but not in sector 27 to 35. The Optigard® ant gel bait, shows positive result in sector 7 to 26, where the ant predation incidences was decreased but based on statistic analysis (Paired T-test), the bait is less affected to control ant predators' population.

SERANGAN SEMUT KEATAS SARANG DAN ANAK PENYU HIJAU DI CHAGAR HUTANG, PULAU REDANG

ABSTRAK

Sejak akhir-akhir ini, peratusan penetasan sarang penyu hijau di Chagar Hutang telah berkurangan disebabkan serangan semut yg tinggi. Sejak kajian pertama serangan semut keatas sarang penyu di Chagar Hutang pada 2004 oleh En. Morita, serangan ini telah menjadi serius; ini akan menyebabkan penurunan bilangan anak penyu. Jadi kajian untuk menyelesaikan masalah semut di Chagar Hutang adalah amat diperlukan. Objektif utama dalam setiap aktiviti pemuliharaan penyu adalah untuk meningkatkan peratusan penetasan, supaya dapat menggantikan pengurangan populasi penyu. Kajian telah dijalankan pada Ogos hingga Oktober 2010. Sampel semut telah diambil semasa pemeriksaan sarang penyu dan diawet di dalam 75% alcohol untuk pengecaman spesis. Sebanyak 60 perangkap makanan telah diletakkan di sekitar kawasan tumbunan pantai Chagar Hutang, ini bertujuan untuk mengkaji kesan umpan agar-agar semut Optigard® terhadap kejadian serangan semut. Dua spesis semut; *Dorylus* sp dan *Pheidologeton* sp telah dikenalpasti menyerang sarang penyu hijau di Chagar Hutang. Kedua-dua semut ini juga tertarik terhadap perangkap makanan. Kadar serangan semut dalam masa kajian adalah 35.0% dan kebanyakan serangan adalah keatas telur-telur penyu. Chagar Hutang telah dipisahkan kepada 35 sektor, dari timur ke barat oleh SEATRU. Semut telah hadir dalam kebanyakan perangkap makanan di sector 0 hingga 26, tetapi tiada di sector 27

hingga 35. Umpan agar-agar semut Optigard® telah menunjukkan keputusan positif dalam sector 7 hingga 26, dimana kejadian serangan semut telah menurun tetapi berdasarkan statistik analisis (Ujian-T berpasangan), umpan tersebut adalah kurang berkesan dalam mengawal populasi semut pemangsa.