

RESEARCH ON SOYBEAN SEEDS ASSOCIATED WITH DANGEROUS  
HEALTH EFFECTS IN MALAYSIA, INDONESIA  
AND SINGAPORE. THE RESULTS OF THE RESEARCH

RESEARCH NUMBER 100

AGRICULTURAL SCIENCE AND TECHNOLOGY  
MALAYSIA UNIVERSITY OF SCIENCE AND TECHNOLOGY MALAYSIA  
2006



STEM AND FOLIAR INSECTS ASSOCIATED WITH MANGROVE TREE  
COMMUNITY IN TOK BALI, KELANTAN AND BAKAU TINGGI KEMAMAN,  
TERENGGANU

By

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Research Report submitted in partial fulfillment of  
the requirement for the degree of  
Bachelor of Applied Science (Biodiversity Conservation and Management)

Department of Biological Sciences  
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This project should be cited as:

Izwan, M.S. 2006. Stem and foliar insects associated with mangrove tree community in Tok Bali, Kelantan and Bakau Tinggi Kemaman Terengganu. Undergraduate thesis, Bachelor of Applied Science in Biodiversity Conservation and Management, Faculty of Science and Technology, Kolej Universiti Sains dan Teknologi Malaysia, Terengganu. 24p.

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:  
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## **ACKNOWLEDGEMENTS**

First and foremost I would like to thank my beloved parents, brother and sister for their supports and concerns. Special appreciation to Miss Jamilah, my beloved supervisor for her advice, extensive contribution and encouragement in this report writing. Appreciation also goes to Puan Wahizatul Afzan for her extensive contribution and in sampling identification of insects.

Many thanks are also extended to Tn. Hj. Razali bin Salam for help and his guidance during my sampling and En Kasawani for organizing trip to Tok Bali which very much appreciated.

Last but not least I would like to express my heartfelt gratitude to my colleagues Mohd Azlan Shah Md Sanip, Mohd Azerule, Mohd Luqman, Freedey Mosulin, Saifuddin, Alesa Zainuddin and Mastura Seruji for their involvement during sampling at Tok Bali.

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## ABSTRACT

Study on stem and foliar insects distribution was conducted in the mangrove stand of Tok Bali Kelantan and Bakau Tinggi Kemaman, Terengganu. The purpose of this study is to investigate the distribution of insect in mangrove stand and its relation with the stand structure. Four dominant tree species at the study areas were *Sonneratia alba*, *Avicennia alba*, *Ceriops decandra*, and *Rhizophora apiculata*. Based on the results, the highest occurrence of insects was from order Coleoptera and Lepidoptera. Mangroves leaves provide a main food source for insects as a trade off in stabilizing the biotic interactions in the mangrove ecosystem. Most of the insects sampled prefer certain host plant for their habitat, mating courtship or feeding.

# HUBUNGKAIT ANTARA SERANGGA PADA BATANG DAN DAUN DENGAN KOMUNITI HUTAN PAYA BAKAU DI TOK BALI KELANTAN DAN BAKAU TINGGI KEMAMAN TERENGGANU

## ABSTRAK

Kajian mengenai taburan serangga ke atas batang dan daun telah dijalankan dikawasan Tok Bali, Kelantan dan di kawasan Bakau Tinggi, Kemaman, Terengganu. Tujuan kajian ini dijalankan adalah untuk mengkaji taburan serangga dan hubungannya dengan struktur dirian hutan di kawasan hutan paya bakau. Terdapat empat spesies yang dominan di kawasan kajian iaitu *Sonneratia alba*, *Avicennia alba*, *Ceriops decandra*, dan *Rhizophora apiculata*. Serangga yang paling banyak disampel ialah daripada order Coleoptera dan Lepidoptera. Hutan paya bakau membekalkan makanan kepada serangga timbal balik serangga membantu dalam menstabilkan unsur biotik di dalam ekosistem hutan paya bakau. Kebanyakan serangga yang disampel menunjukkan kecenderungan kepada spesies perumah tertentu sebagai habitat, tempat pengawanan atau pemakanan.