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Fungus isolated from wounded hopea odorata roxb in Gong Badak District, Terengganu / Siti Asfarlina Mazidel.

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FUNGUS ISOLATED FROM WOUNDED *Hopea odorata* Roxb. IN GONG BADAK DISTRICT, TERENGGANU

By

Siti Asfarlina Binti Mazidel

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

Department of Biological Sciences
Faculty of Science and Technology
UNIVERSITI MALAYSIA TERENGGANU
2007

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UNIVERSITI MALAYSIA TERENGGANU

JABATAN SAINS BIOLOGI
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UNIVERSITI MALAYSIA TERENGGANU

PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II
RESEARCH REPORT VERIFICATION

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: FUNGUS ISOLATED FROM WOUNDED *Hopea odorata* Roxb. IN GONG BADAK DISTRICT, TERENGGANU oleh SITI ASFARLINA BINTI MAZIDEL, no. matrik: UK 10207 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 Gunaan (Pemuliharaan & Pengurusan Biodiversiti), Fakulti Sains dan Teknologi, Universiti Malaysia Terengganu.

Disahkan oleh: / Verified by:

.....

Penyelia Utama / *Main Supervisor*

Nama: JAMILAH MOHD SALIM @ HALIM

Cop Rasmi: Pensyarah
Jabatan Sains Biologi
Fakulti Sains dan Teknologi
Universiti Malaysia Terengganu
21030 Kuala Terengganu.

Tarikh: 8/5/07

.....

Ketua Jabatan Sains Biologi /*Head, Department of Biological Sciences*

Nama: DR. AZIZ BIN AHMAD

Cop Rasmi: Ketua
Jabatan Sains Biologi
Fakulti Sains dan Teknologi
Universiti Malaysia Terengganu
21030 Kuala Terengganu

Tarikh: 8/5/2007

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cm	-	centimeter
DBH	-	diameter breast height
mm	-	milimeter

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ABSTRACT

Urban planted trees always subjected to mechanical damage and disturbance resulted in wounding of sapwood tissues. Wounded living trees are exposed to invasion by various microorganisms including decay fungus. The importance of this study is for monitoring tree health as part of plant conservation efforts. The study was conducted to examine the occurrence of fungus on stem wound of urban planted *Hopea odorata* around Gong Badak District, Kuala Terengganu. Wound associated fungi were isolated and identified to lowest possible taxa. From 160 trees surveyed, 18 trees showed the presence of stem wound which due to several causes. A total of 4 trees had a fresh wound while 14 trees had an old wound. There were 37 isolates obtained from wounded tissues, 30 isolates from old wound and 7 isolates from fresh wound. Overall, nine morphotypes of fungus were isolated with five morphotypes were unidentified (F1, F2, F3, F4 and F5). Identified morphotypes of fungus consists of *Fusarium, Trichoderma, Nigrospora* and *Aspergillus*. The most frequently isolated fungus was F1 and the least frequent were *Aspergillus*, F4 and F5. Fungus occurrence was not related to wound age, size or wound severity.

KULAT YANG DIASINGKAN DARIPADA KECEDERAAN *Hopea odorata* Roxb. DI DAERAH GONG BADAK, TERENGGANU

ABSTRAK

Tanaman bandaran seringkali mengalami kerosakan dan gangguan mekanikal mengakibatkan kecederaan pada tisu sapwood tanaman tersebut. Pokok hidup yang cedera terdedah kepada serangan pelbagai jenis mikroorganisma termasuk kulat yang menyebabkan pereputan pokok. Kepentingan kajian ini adalah untuk memantau kesihatan pokok sebagai sebahagian daripada usaha pemuliharaan tumbuhan. Kajian telah dijalankan untuk meneliti kewujudan kulat pada batang pokok *Hopea odorata* yang luka di daerah Gong Badak, Kuala Terengganu. Kulat yang berasosiasi dengan luka, dipencil dan dikenalpasti kepada taksa yang terendah. Daripada 160 batang pokok yang diperiksa, didapati 18 pokok mengalami luka berpunca daripada beberapa faktor. Sejumlah 4 pokok mempunyai luka yang baru manakala 14 pokok mempunyai luka yang lama. Terdapat 37 isolat kulat yang diperoleh daripada tisu pokok yang terluka, dengan 30 isolat adalah dari luka lama dan 7 isolat dari luka baru. Daripada keseluruhan isolat, terdapat sembilan jenis kulat yang berbeza, dengan lima jenis kulat tidak berjaya dikenalpasti iaitu F1, F2, F3, F4 dan F5. Kulat yang dikenalpasti pula ialah *Fusarium, Trichoderma, Nigrospora* dan *Aspergillus*. Kulat yang mempunyai kekerapan isolat paling tinggi ialah jenis F1 manakala yang paling rendah adalah *Aspergillus*, F4 dan F5. Kehadiran kulat didapati tidak berkait dengan usia, saiz luka atau keadaan luka.