

WOUND CLOSURE RATE OF SELECTED MANGROVE
TREE IN PENINSULAR MALAYSIA AND
SARAWAK, MALAYSIA

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TERENGGANU AND TOK BALI, KELANTAN

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TERENGGANU AND TOK BALI, KELANTAN

By

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:
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ABSTRACT

Artificial wound has been established on *Avicennia alba*, *Sonneratia alba* and *Rhizophora apiculata* in mangrove stand of Kemaman, Terengganu and Tok Bali, Kelantan. Two type mechanical wounds, a deep wound (exposing the xylem) and a scratch (removing the bark) were inflicted on the trunk at height of 2 meter and 0.3 meter from ground. The wound closure of the selected tree species consists of whether a compartmentalization process, formation of new periderm layer by phloem or of callus from wood cambium which are affected by time. Neither new periderm formation nor callus was recorded for *A. alba* and *R. apiculata* after 80 days post wounding. *S. alba* forming a wound periderm, closing wound at the rate of at upper stem is 0.8 ± 0.4 mm and at lower stem is 5.4 ± 1.3 mm in 80 days. Wound closure at upper stem was slower than wound at the lower part of the stem that exposed to tidal. New bark was form 20 days post wounding for bark scratch.

KADAR PENUTUPAN LUKA PADA POKOK PAYA LAUT TERPILIH DI KEMAMAN, TERENGGANU DAN TOK BALI, KELANTAN

ABSTRAK

Kecederaan buatan (luka) telah dibuat ke atas batang pokok *Avicennia alba*, *Sonneratia alba* dan *Rhizophora apiculata* di hutan paya bakau di Kemaman, Terengganu and Tok Bali, Kelantan Pantai. Dua jenis luka mekanikal iaitu luka dalam (mendedahkan tisu xilem) dan luka ringan (mengikis kulit luar) telah dibuat pada batang utama pada ketinggian 2 meter dan 0.3 meter dari tanah. Penutupan luka pada batang pokok terpilih adalah melalui samada proses kompartmen, pembentukan lapisan periderma baru oleh floem atau pembentukan kalus oleh kambium berkadaran dengan masa. *A. alba* dan *R. apiculata* tidak menunjukkan pembentukan periderma atau kalus dalam masa 80 hari. *S. alba* menjalankan pembentukan periderma yang menutupi luka pada kadar 0.8 ± 0.4 mm pada luka bahagian atas dan 5.4 ± 1.3 mm pada luka di bahagian bawah dalam 80 hari. Bahagian luka di bahagian atas menunjukkan penutupan luka yang lambat berbanding bahagian luka yang ditenggelami air semasa air pasang. Luka ringan telah membentuk kulit baru dalam masa 20 hari.