HAWKSBILL TURTLE (*Eretmochelys imbricata*) EGGS AND HATCHLINGS IN MALACCA : MORPHOMETRIC AND HEAVY METAL ANALYSES

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Hawksbill turtle (Eretmochelys imbricata) eggs and matchlings in Malacca : morphometric and heavy metal analysis / Haw See Liong.

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By

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PENGAKUAN DAN PENGESAHAN LAPORAN PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:
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g	-	gram
μ	-	micro
dw	-	dry weight
ww	-	wet weight

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ABSTRACT

A study on the hawksbill turtle eggs and hatchlings was conducted from June to October, 2007 in Malacca. A total of 28 nests incubated in the beach hatchery (n = 14) and styrofoam box (n = 14) were monitored every night for hatchlings emergence and the incubation period. Measurements of hatchlings (n = 20 per clutch) produced from those 28 nests were also taken. T-test analysis showed no significant difference between beach hatchery and styrofoam box for the incubation period and hatchlings size. Hawksbill eggs from Malacca had an average diameter of 23.3 cm while average straight carapace length and width and body weight of hatchlings were 3.93cm and 2.96 cm, and 13.1 g respectively. Regression analysis showed a positive correlation between size of eggs with hatchlings size and mass. Concentration of heavy metal (Cd, Cu, Hg, Mn, Pb and Zn μg/g wet wt.) in hawksbill fresh eggs were also analyzed in this study. All the value (μg/g wet wt.) of these metals (Cd, Cu, Mn, Pb and Zn) was lower than the permissible limits set by Malaysian Food Regulation (1985) except for Hg. On the other hand, the mean concentrations of heavy metals in fresh and un-hatched eggs showed no significant differences in this study. Thus, a non-killing method of heavy metal monitoring using un-hatched turtle eggs can be implemented in further study..

KAJIAN TELUR DAN ANAK PENYU KARAH (*Eretmochelys imbricata*) DI MELAKA : ANALISIS MORFOMETRIK DAN LOGAM BERAT

ABSTRAK

Kajian terhadap telur dan anak penyu karah telah dijalankan di Melaka pada Jun hingga ke Oktober, 2007. Sebanyak 28 sarang yang dieram di pantai hatcheri (n = 14) dan kotak styrofoam (n =14) telah dijaga dan diperhati setiap malam untuk mendapatkan bacaan tempoh pengeraman dan masa penetasan anak penyu yang tepat. Dua puluh ekor anak penyu dari setiap sarang yang menetas daripada 28 sarang tersebut telah dibuat pengukuran ke atas saiz badan mereka. Analisis T-test menunjukkan bahawa tiada perbezaan pada tempoh pengeraman and saiz anak penyu yang dihasilkan di pantai hatcheri dan kotak styrofoam. Telur penyu karah mempunyai purata diameter sebanyak 23.3 cm manakala purata panjang dan lebar karapas dan berat badan anak penyu masing-masing adalah sebanyak 3.93 cm dan 2.96 cm, dan 13.1 g. Analisis regresi menunjukkan suatu hubungan positif di antara saiz telur dengan saiz dan berat anak penyu. Kepekatan logam berat (Cd, Cu, Hg, Mn, Pb, Zn μg/g berat basah) di dalam telur penyu karah yang segar juga telah dianalisis di dalam kajian ini. Kesemua nilai kepekatan (μg/g wet wt.) logam bagi Cd, Cu, Mn, Pb and Zn adalah lebih rendah daripada tahap yang dibenarkan oleh Peraturan Pemakanan Malaysia (1985) kecuali Hg. Di samping itu, hampir semua logam berat yang dianalisis di dalam telur segar and rosak mempunyai kepekatan yang agak sama. Oleh itu, suatu kaedah yang tidak melibatkan kematian atau kerosakan dalam mengkaji kepekatan logam berat dengan menggunakan telur penyu yang rosak boleh dilaksanakan pada kajian selanjutnya.