STUDIES OF THE MALAYAN PANGOLIN (*Manis javanica* Desmarest) FROM PENINSULAR MALAYSIA

MUHAMMAD HAFIZ BIN SULAIMAN

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Chairperson : **Chong Ju Lian, Ph.D**

Member : **Marina Bt. Hassan, Assoc. Prof.**
Wahizatul Afzan Bt Azmi, Ph.D

School : **School of Marine and Environmental Sciences**

Malayan Pangolin (*Manis javanica* Desmarest) is threatened by illegal hunting and habitat loss. Conservation efforts are difficult due to lack of information in various aspects. As such, this study was conducted to collect information which could help in the Malayan Pangolin conservation. Questionnaire and interview-based survey was used to obtain hunter's knowledge about pangolin. Stratified random-sampling techniques combined with snowball sampling were utilized for this purpose. Results showed that the pangolins mostly inhabit lowland primary forest (30.4%) and majority of the hunters (73%) chose tracking method as their most preferred hunting technique. Determination of preferred den and habitat utilization of the pangolins was conducted at pristine forest (Krau Wildlife Reserve), secondary forest (Kampung Sungai Berua) and highly disturbed area (Pos Pulat) by searching for active and non-active dens. Findings showed that hollow logs were mostly preferred by the pangolins to be utilized as a den site (48.36%). Pangolins' dens were also found abundantly at KWR as compared to KSB and PP, thus prove that pangolins have high adaptation ability and pristine forest serves important habitat for them. For morphometric measurements, it was conducted by measuring head-body length, tail length, total length and weight. Both male and female pangolins showed high correlation between weight and total length with r=0.6342 and r=0.8535 respectively. Similar trend was also shown for correlation between tail length and head-body length. Parasitism is known as one of the cause contributing to the failure of pangolin species husbandry in conservation projects worldwide. From the findings of this study, only one parasite species was recorded on the Malayan Pangolin namely *Amblyomma javanense*, with more male pangolins being infested by the ectoparasite (88.9%). However, the mean intensity on the female pangolins was significantly higher (72) as compared to the male pangolins (31.6). Overall, this research provided valuable and essential information on the ecological, morphological, parasitological, and hunter's knowledge of the Malayan Pangolin in Malaysia. Nonetheless, more studies should be conducted in every aspect because there is still much not known about the Malayan Pangolin.

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**KAJIAN TENGGILING MALAYA (*Manis javanica* Desmarest)
DI SEMENANJUNG MALAYSIA**

MUHAMMAD HAFIZ BIN SULAIMAN

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Pengerusi   **: Chong Ju Lian, Ph.D**

Ahli   **: Marina Bt Hassan, Assoc. Prof.
Wahizatul Afzan Bt Azmi, Ph.D**

Pusat Pengajian   **: Pusat Pengajian Sains Marin dan Sekitaran**

Tenggiling Malaya (*Manis javanica* Desmarest) diancam pemburuan haram dan kemusnahan habitat. Usaha konservasi adalah sukar kerana kekurangan informasi dalam pelbagai aspek. Oleh itu, kajian telah dijalankan bagi mengumpul informasi yang boleh membantu di dalam konservasi Tenggiling Malaya. Tinjauan soal selidik dan temuramah telah digunakan untuk memperolehi pengetahuan pemburu tentang tenggiling. Teknik *Stratified random-sampling* dan *snowball sampling* telah digunakan bagi tujuan ini. Keputusan menunjukkan kebanyakan tenggiling tinggal di hutan primer tanah rendah (30.4%) dan majoriti pemburu (73%) memilih kaedah pengesanan sebagai pilihan utama teknik perburuan. Penentuan sarang pilihan dan penggunaan habitat oleh tenggiling telah dijalankan di hutan dara (Rezab Hidupan Liar Krau), hutan sekunder (Kampung Sungai Berua) dan kawasan sangat terganggu (Pos Pulat) dengan mencari sarang yang aktif dan tidak aktif. Penemuan menunjukkan lubang kayu mati menjadi pilihan utama tenggiling untuk dijadikan sarang (48.36%). Sarang tenggiling juga banyak ditemui di KWR berbanding KSB dan PP, dengan ini membuktikan bahawa tenggiling mempunyai kebolehadaptasian yang tinggi dan hutan dara merupakan habitat utama bagi tenggiling. Bagi ukuran morfometrik, ia telah dijalankan dengan mengukur panjang kepala-badan, panjang ekor, panjang keseluruhan dan berat. Kedua-dua tenggiling jantan dan betina menunjukkan korelasi yang tinggi di antara berat dan panjang keseluruhan dengan masing-masing $r=0.6342$ and $r=0.8535$. Keadaan serupa juga ditunjukkan bagi korelasi antara panjang ekor dan panjang kepala-badan. Parasitisma dikenalpasti sebagai salah satu penyebab yang menyumbang kepada kegagalan projek konservasi tenggiling dalam sangkar di seluruh dunia. Berdasarkan hasil kajian, hanya satu spesies parasit direkodkan pada Tenggiling Malaya iaitu *Amblyomma javanense*, dengan tenggiling jantan yang dijangkiti parasit lebih tinggi (88.9%). Namun, purata kepadatan pada tenggiling betina secara signifikannya direkodkan lebih tinggi (72) berbanding tenggiling jantan (31.6). Keseluruhannya, kajian ini menyediakan informasi berharga dan penting berkenaan ekologikal, morfologikal, parasitologikal dan pengetahuan pemburu tentang tenggiling di Malaysia. Namun, lebih banyak kajian perlu dijalankan dalam setiap aspek kerana masih banyak yang belum diketahui berkenaan Tenggiling Malaya.