

## SEQUENCE VARIATION IN MALAYAN TAPIR (*TAPIRUS INDICUS*) INFERRED USING PARTIAL SEQUENCES OF THE CYTOCHROME *B* SEGMENT OF THE MITOCHONDRIAL DNA

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**ABSTRACT** – Comparison of 321 bp long mtDNA cytochrome b sequences of wild and captive Malayan tapir (*Tapirus indicus*) revealed low variation among the individuals investigated. Phylogenetic analyses using distance (neighbor-joining) analysis supported the monophyletic status of the Malayan tapir. Two haplotypes were identified out of 13 Malayan tapir analyzed.

**Keywords** – sequence characterization, species-specific sites, phylogenetic analysis

**ABSTRAK** – Perbandingan 321 pasangan bes bagi jujukan sitokrom b pada mitokondrial DNA ke atas individu liar dan dalam kurungan Tapir Malaya menunjukkan variasi yang rendah. Analisa filogenetik menggunakan kaedah “distance” menyokong status monofiletik Tapir Malaya. Dua “haplotype” dikenalpasti daripada 13 individu Tapir Malaya yang dianalisa.

**Kata kunci** – pencirian sekuen, bes “species-specific”, analisa filogenetik

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This study compares a 321bp segment of the cytochrome b (*cyt b*) of the mitochondrial DNA (mtDNA) gene to assess the sequence variation of the Malayan tapirs. All sequences were deposited in the GenBank database (accession numbers EU224327- EU224339). Samples were collected from 13 wild and captive Malayan tapir (Table 1). Total genomic DNA from tissue samples was isolated following a modified CTAB-based protocol (Grewe *et al.*, 1993). Blood samples were collected and preserved in Whatman FTA cards and DNA isolation

was done according to the manufacturers' instructions. Sequences of other families from the Order Perissodactyla (Family Equidae and Rhinocerotidae) were obtained from GenBank: *Equus burchellii* (DQ470805), *Equus caballus* (DQ297663), *Equus przewalskii* (DQ223534), *Rhinoceros sondaicus* (AJ245725), *Dicerorhinus sumatrensis* (AJ245723), *Rhinoceros unicornis* (X97336) and *Ceratotherium simum* (Y07726). *Cyt b* sequence of *T. indicus* (AF145734) and *T. terrestris* (AF056030) were also obtained from the GenBank.