

Volume 6, No. 1 (Supplement)

June 2011

ISSN 1823-2140

The
National University
with an
INTERNATIONAL REACH



UNIVERSITI
KEBANGSAAN
MALAYSIA
National University of Malaysia

MEDICINE & Health

The Official Journal of The Faculty of Medicine UKM

7th Malaysia Indonesia Brunei Medical Sciences Conference "TOWARDS A HOLISTIC AND INTEGRATIVE APPROACH IN HEALTHCARE"



22nd - 24th July 2011

Equatorial Hotel, Bangi, Selangor,
MALAYSIA

officiated by

Y.B Datuk Rosnah Haji Abdul Rashid Shirlin
Deputy Minister of Health Malaysia

Organised by



ENTOMOFAUNA OBTAINED FROM FORENSIC ENTOMOLOGICAL STUDIES CONDUCTED IN A SECONDARY FOREST IN ULU GOMBAK, SELANGOR

Chen CD¹, Nazni WA², Jeffery J³, Ramli R¹, Lau KW¹, Low VL¹, Chia KHM¹, Sofian-Azirun M¹

¹*Institute of Biological Sciences, Faculty of Science, University of Malaya, Kuala Lumpur, Malaysia*

²*Medical Entomology Unit, Institute for Medical Research, Kuala Lumpur, Malaysia*

³*Department of Parasitology, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia*

Background:

Medico-legal forensic entomology plays an important role in determination of time since death or post mortem interval (PMI). The present study reported the entomofauna recovered from forensic entomological studies conducted in a forested area in Ulu Gombak, Selangor.

Materials and Methods:

Monkey carcasses were used as model for human decomposition study. Monkeys were euthanized in accordance with established procedures by Department of Wildlife and National Parks Peninsular Malaysia. The study protocol was approved by Institute for Medical Research's Unit of Animal Care and Use Committee [ACUC/KKM/02(2/2008)]. After death was confirmed, the monkey carcasses were placed in outdoor (two replicates) and indoor (two replicates), respectively. The carcass was monitored daily from until no more larvae and bones were observed from the carcass. Adult flies were caught by using a sweep net. The fly larvae, ants and beetles were collected using forceps for preserved in 70% ethyl alcohol. The collected specimens were then processed for species identification.

Results:

Flies (Diptera) belonging to four families were obtained from the studies. However, only 13 species of flies belonging to three families can be identified, which are Calliphoridae, Muscidae and Stratiomyiidae, while a number of flies belonging to the family of Sarcophagidae were not able to be identified. Flies belonging to family Calliphoridae were the dominant flies as forensic indicator, followed by Muscidae, Sarcophagidae and Stratiomyiidae. This study showed that *Chrysomya villeneuvei* (Patton), *Chrysomya chani* (Kurahashi) and *Chrysomya pinguis* (Walker) were dominant in monkey carcasses in forested area. On the other hand, three species of ants (Hymenoptera) were found visiting the carcasses in all decomposition stages. Beetles (Coleoptera) belonging to eight families were obtained throughout the studies.

Conclusion:

Different species of insect fauna obtained from carcasses may act as a habitat indicator. Generally, *Chrysomya* sp. (Diptera: Calliphoridae) were mainly found in outdoors; while beetles found in indoor were more diverse compared to outdoor.

Keywords:

forensic entomology, post mortem interval (PMI), Diptera, Hymenoptera, Coleoptera