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DISTRIBUTION OF FORENSICALLY-IMPORTANT ENTOMOFAUNA ON CARCASS AT HIGH RISE BUILDING IN KUALA LUMPUR, MALAYSIA

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Background:

The knowledge of fly distribution and succession is a necessary pre-requisite for estimating the post-mortem interval using entomological data. Given the increasing number of abandoned dead bodies found at high rise buildings, the first set of study was carried out to investigate the distribution of forensically important entomofauna at high rise building in Malaysia.

Materials and Methods:

Paired dead monkeys were exposed simultaneously, one at the top floor (130-feet height) of the Clinical Block of UKM Medical Centre (UKMMC) and the other at the ground level at the backyard of UKMMC as control. The species visiting both carcasses were monitored daily for 30 days. Adult flies were captured using sticky papers, while larval stages were preserved using 70% alcohol.

Results:

The top floor carcass was infested with only three species: *Megaselia scalaris*, *Sarcophaga* sp. and *Synthesiomyia nudiseta*. Fewer larvae were observed, too few to form maggot masses. In comparison, the outdoor carcass was infested by huge numbers of a variety of common corpse-visiting species: *Chrysomya megacephala*, *Ch. rufifacies*, *Ch. nigripes*, *Sarcophaga* spp., *Hemipyrellia* sp., *Hydrotea* spp., *Musca sorbens* and other insect species. The difference in entomofauna distribution was most probably due to the ability of certain flies to reach high altitude and could survive different types of environmental conditions. The presence of *S. nudiseta* only on the carcass at the top floor was in agreement with previous findings that this species only can be found indoors.

Conclusion:

The above findings highlight the importance of better understanding of fly behaviour and distribution in assisting forensic investigations, especially when death occurs at high rise buildings.

Keywords:

forensic entomology, fly distribution, high rise building, *Synthesiomyia nudiseta*