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# MORPHOLOGICAL DIVERSITY OF EXTERNAL MALE GENITALIA OF SEVEN MOSQUITO GENERA IN SRI LANKA

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Structural variations of external male genitalia are promising identification features of mosquitoes. The present study was aimed to determine the generic and species-specific variations of male genital structures of common mosquito species in Sri Lanka. Larvae and adult mosquitoes were sampled from September to November 2020 from selected sites in the Kandy district. Larvae were reared to adult, and male mosquitoes were separated from the colony. Light trap samples were carefully observed to separate male mosquitoes. Standard taxonomic keys were used for identification. Genitalia of 52 male mosquitoes belonging to seven genera and 15 species were separated and slide-mounted using Canada Balsam. Detailed images of mounted genitalia were photographed using a micro-image system. Structural variations were reported from the basal lobe, basistyle, claspette, phallosome and dististyle of male genitalia. *Aedes* mosquitoes were characterized by the clump of setae present in the basal lobe. Filament and row of setae in the claspette were used to differentiate *Aedes albopictus, Aedes aegypti* and *Aedes greenii*. Globular structure in the dististyle was unique to *Aedes vittatus*. Genus *Anopheles* was characteristic of the spines present at the base of the basistyle. Globular structure in the claspette end was a distinctive feature of *Anopheles maculatus*. *Armigeres* mosquitoes were characterized by the presence of tooth-like structures along the dististyle. Dense setae on the basistyle was specific to *Armigeres subalbatus*. Outward curved dististyle was a prominent feature of *Coquilletidia crassipes*. A crown-like structure with a comb of teeth in the tenth sternite and appendages on the subapical lobe was characteristic of *Culex*. *Orthopodomyia* species were distinguished with the number of spines on the basal lobe. The structure of the phallosome was unique to *Toxorynchites* mosquitoes. Generic and species-specific features of male genitalia reported from this study are essential in identifying mosquito species complexes in Sri Lanka.

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