

EMILY SETSER, AUSTIN HUMBERT, JAMES JOY, Dept of Biological Sciences, Marshall University, Huntington, WV 25755, and RITA RIO, Dept of Biology, West Virginia University, Morgantown, WV, 26506. Aggregation patterns of sensory sensillae in the food canal and cibarium of the tsetse fly, *Glossina morsitans morsitans*.

Mouthparts of hematophagous vectors enable the transfer of blood and pathogens from and to their hosts. Here we describe aggregation patterns of basiconic and setiform sensillae in the food canal and cibarium of the medically significant tsetse fly, *Glossina morsitans morsitans* Westwood. Mean body length of females was significantly greater than males. Mean lengths of the food canal and cibarium were also significantly greater in females than males, even when correcting for the greater body lengths of females, but there was no significant difference in total number of sensillae in the food canal or cibarium between the sexes. A pair of basiconic (campaniform) sensillae was consistently present in the food canal of every individual, but numbers of setiform sensillae in the canal of both females and males varied from 53 to 74. No basiconic sensillae were observed in the cibarium proper of any individual, but four minute conical basicones embedded in a sclerotized plate at the posterior edge of the cibarial wall were observed. The number of setiform sensillae in the cibarium varied from 5 to 12 in females and 7 to 11 in males. Setiform and basiconic sensillae were significantly aggregated in the proximal-most (i.e., nearest the head) food canal region of both sexes, whereas setiforms were significantly aggregated in the mid regions of the cibarium. Sensilla aggregation patterns in tsetse flies are very different from those documented for tabanid flies indicating potential differences in monitoring blood flow between these two groups of hematophagous feeders.