

RESEARCH NOTE

SEASONAL OCCURRENCE OF PHLEBOTOMINAE SAND FLIES (PHLEBOTOMINAE: DIPTERA) AND IT'S CORRELATION WITH KALA-AZAR IN EASTERN UTTAR PRADESH, INDIA

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Abstract. In this investigation, the species composition of sand flies, and their seasonality, nocturnal activity, sex ratio, and resting site, for implementation of future control measures, were surveyed in eastern (Gonda and Basti) Uttar Pradesh, India. Adult sand flies (2,893) were collected from internal and external sites by sticky and light traps. The sand flies were captured using light traps hung at different heights in trees and in peridomiliary and extradomiliary areas of a forest during both dry and rainy months. The traps were kept out between sunset and sunrise of the following day. In the extradomiliary environment, the traps were installed at 1, 3 and 5 m above the ground. In this investigation, a total of 5 species were obtained: *Phlebotomus papatasi*, *P. sergenti*, *Sergentomyia sintoni*, *S. punjabensis* and *S. dentata*. The number of sand flies peaked in September and declined by December. The maximum and minimum numbers were found at 8:00 PM and 5:00 to 6:00 AM, respectively. The female to male ratio of the phlebotominae sand flies varied from a high in October to a low in June. The number of sand flies in the external regions was significantly more ($p < 0.05$) than the internal regions in all months except May, June, December and January. No flagellate infections were observed in any other species of sand flies. Using the results of this investigation, health workers in this area may be better able to control and prevent leishmaniasis.

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