

The Phlebotomine fauna in dwellings and in the field was investigated in an area with a radius of 3 miles in an established focus of cutaneous leishmaniasis [caused by *Leishmania tropica*] on the eastern slopes of Mt. Elgon in Bungoma District, Kenya. Buildings were searched in every month of 1969. The field assessment of the Phlebotomine fauna lasted from September 1969 to June 1970. *Sergentomyia* (*Phlebotomus*) *bedfordi* (Newst.), *S. (P.) antennata* (Newst.), *S. (P.) schwetzi* (Adl., Thdr. & Parr.) and *Phlebotomus pedifer* Lewis, Mutinga & Ashford were found in the buildings, and these 4 species and also *S. (P.) ingrami* (Newst.) were found in the field. *P. pedifer*, the only species found that bit man, bit readily in caves where it was the predominant species. Only 3 males and 1 female were collected from a dwelling. Some 1544 females of 4 species were dissected, including 691 of *P. pedifer*, 57 of which were found to have promastigotes in the anterior station. These promastigotes produced cutaneous lesions in hamsters. It is concluded that the findings strongly suggest that *P. pedifer* is the vector of cutaneous leishmaniasis in the Mt. Elgon area.