

Morphometric and meristic characterization of *Phlebotomus argentipes* species complex in northern Sri Lanka: Evidence for the presence of potential leishmaniasis vectors in the country

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Abstract

The transmission of cutaneous leishmaniasis (CL) is of public health concern in Sri Lanka. The parasite *Leishmania donovani* is reported to be the causative agent for CL in Sri Lanka. However there is no report on the vector of CL in the country. *Phlebotomus argentipes* sensu lato is the well known vector of *L. donovani* which causes visceral leishmaniasis (VL) in the nearby South India. The taxon *Ph. argentipes* previously reported to occur as a species complex comprising of two morphospecies namely A and B. The taxonomy of the *Argentipes* complex was reassessed recently and reported to have three species viz. *Phlebotomus glaucus*, *Ph. argentipes* sensu stricto and *Ph. annandalei*. A study was carried out in Jaffna mainland, where three CL patients have been recorded, and two associated islands in northern Sri Lanka to record the presence of the members of the *Argentipes* complex. Sandflies were collected using human landing and cattle baited collections. Collected samples were analyzed based on reported morphometric and meristic characteristics. The study revealed the presence of all three members of the complex in which *Ph. glaucus* and *Ph. argentipes* s.s. are reported for the first time in Sri Lanka.

Indexed keywords

EMTREE medical terms: animal; animal structures; article; biometry; cattle; classification; disease carrier; female; growth, development and aging; histology; human; male; methodology; *Phlebotomus*; Sri Lanka

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