

## Prevalence of *Phlebotomus argentipes* Morphospecies B and Public Awareness and Perception Toward Sandfly Menace in Delft Island, Northern Sri Lanka.

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In Sri Lanka many patients have been identified for cutaneous leishmaniasis (CL) caused by *Leishmania donovani* zymodeme which is typically associated with visceral leishmaniasis and vectored by *Phlebotomus argentipes* which exists as a species complex comprising two morphospecies viz A and B. With the background, a study was carried out to characterize *P. argentipes* population and also to evaluate the public perception toward sandfly menace in Delft Island. Sandfly specimens were collected from a western area of Delft Island. Collections were made in May 2005. Human landing catches (HLC) and cattle baited net collections (CBNC) were performed. A structured questionnaire-based study was carried out in July-August 2005. The questionnaire with multiple choices and the interviews comprised were designed to elicit three types of information a) demographic information, b) knowledge about sandfly and leishmaniasis and c) attitude towards and steps taken to prevent sandfly biting.

Forty-one flies were analysed for the relative length of the *S.chaetica* compared with flagellomere-II. All specimens had short *S.chaetica* resembling morphospecies B. Chief of occupants, 59 males and 49 females, of randomly selected 108 house-holds (10% of the total house holds in Delft) were interviewed. Ninety three percent of those interviewees categorized the biting by sandflies as severe, and the rest as a moderate nuisance.

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Sixteen percent had knowledge of more than one possible breeding site. Thirty percent however, had no knowledge of the possible breeding sites of sandflies. Biting activity of sandflies was reported to be in the evening by 2%, midnight 41%, early morning 8% and throughout the night 49%. None of the respondents reported daytime biting. None of the 108 respondents were aware of leishmaniasis, or its symptoms, and all were unaware of the prevalence of leishmaniasis in mainland Sri Lanka and Tamil Nadu.

Morphospecies B is linked with VL-endemicity in India. Although no cases of CL have been reported from permanent Delft Island residents, there is a serious risk of infecting the vector population on Delft Island with *L.donovani* arriving from mainland Sri Lanka. Hence, there is a clear need to educate the people of Delft, and also probably other areas of the Northern dry zone, on the role of sandflies in the transmission of leishmaniasis.