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Entomological survey for sand fly fauna in cutaneous leishmaniasis endemic sites of Nigde

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Leishmaniases are widespread in most countries in the Mediterranean Basin and it is also present in two clinical forms, cutaneous and visceral, in Turkey. The studies were carried out on sand fly fauna in leishmaniasis endemic areas have great importance. So far, the entomological and parasitological surveys were performed in 27 endemic/sporadic areas where one or both of the diseases are present. To date, a total of 21 *Phlebotomus* and 4 *Sergentomyia* species were determined in Turkey. *L. infantum* is responsible for both clinical forms occurred many areas of Turkey while *L. tropica* causes cutaneous leishmaniasis especially Southeastern and Western parts of Turkey. *P. tobbi* is the proven vectors of CL caused by *L. infantum* in East Mediterranean part of Turkey. *P. sergenti* and *P. similis* are probable vectors of *L. tropica* in Southeastern and Western parts of Turkey, respectively.

In the present study, we aimed to determine sand fly fauna of three endemic areas for CL in Nigde province where located in southeast Anatolia. A total of 23 CL cases had been reported in our study area.

The field works were carried out between 04-06 August 2010 in the in three villages named Eynelli (alt. 1674 m asl.), Fesleğen (alt. 1692 m asl.) and Balcı (alt. 1329 1545m asl.) of Nigde province. We collected 418 sand fly specimens using 40 light traps in three nights. The identification of the species was done using several keys, previous drawings and morphometric measurements. The following 7 *Phlebotomus* species were identified; *P. halepensis* (74.34%), *P. simici* (13.90%), *P. papatasi* (3.83%), *P. neglectus* (2.87%), *P. balcanicus* (2.63%), *P. sergenti* (2.39%) and *P. tobbi* (0.23%). In general and in all individual settlements, *P. halepensis* was found to be dominant species. Because of very low population density of other proven vector, *P. sergenti*, in the area and experimentally confirmed vectorial competence of *P. halepensis*, this species can transmit *L. tropica* in our study areas.

This work is a part of an ongoing PhD thesis and to incriminate *P. halepensis* as the potential vector of the disease, the study will further focus on isolating the *Leishmania* parasite in the sand fly specimens using microscopical examination and real-time PCR method.