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INTRODUCTION

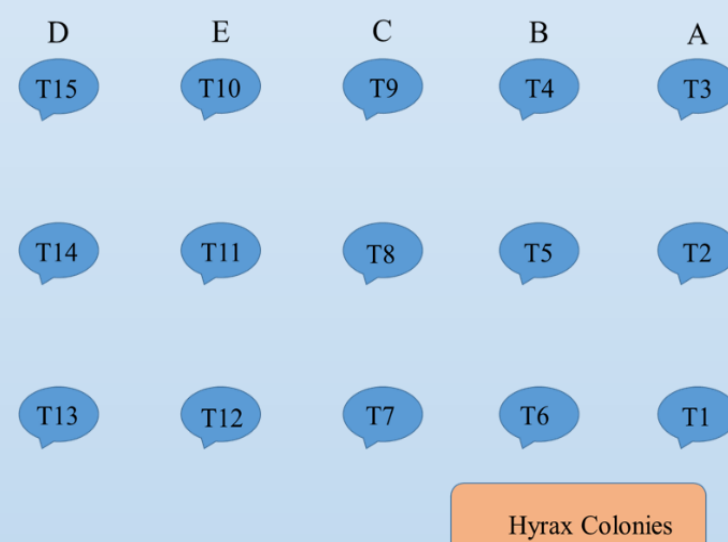
Leishmaniasis is still considered a neglected disease by the World Health Organization. In Palestine Leishmaniasis is endemic, specifically Cutaneous Leishmaniasis (CL) caused by *Leishmania tropica*, which has been spreading rapidly while *L. major* infections remain confined to the Jericho region of the Jordan Valley. We are applying an eco-health approach that integrates public health measures, epidemiology, and disease ecology to study CL caused by *L. tropica* in the Palestinian West Bank.

OBJECTIVE

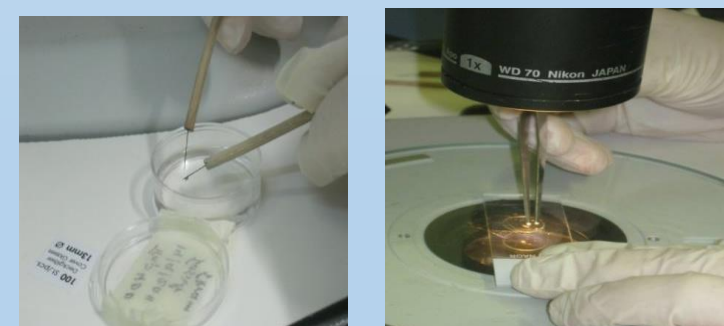
The study aims to evaluate the effect of distance from hyrax (the reservoir hosts) colonies on *Phlebotomus sergenti* (the vector sand fly species) densities.

METHODS

- We trapped sand flies in an urban setting at the Tubas city limits and adjacent to hyrax colonies. Three 0.6 km long trapping transects.
- Leishmania* parasites were detected by internal transcribed spacer 1 (ITS1) PCR.



- Taxonomic identifications were conducted on the sand flies

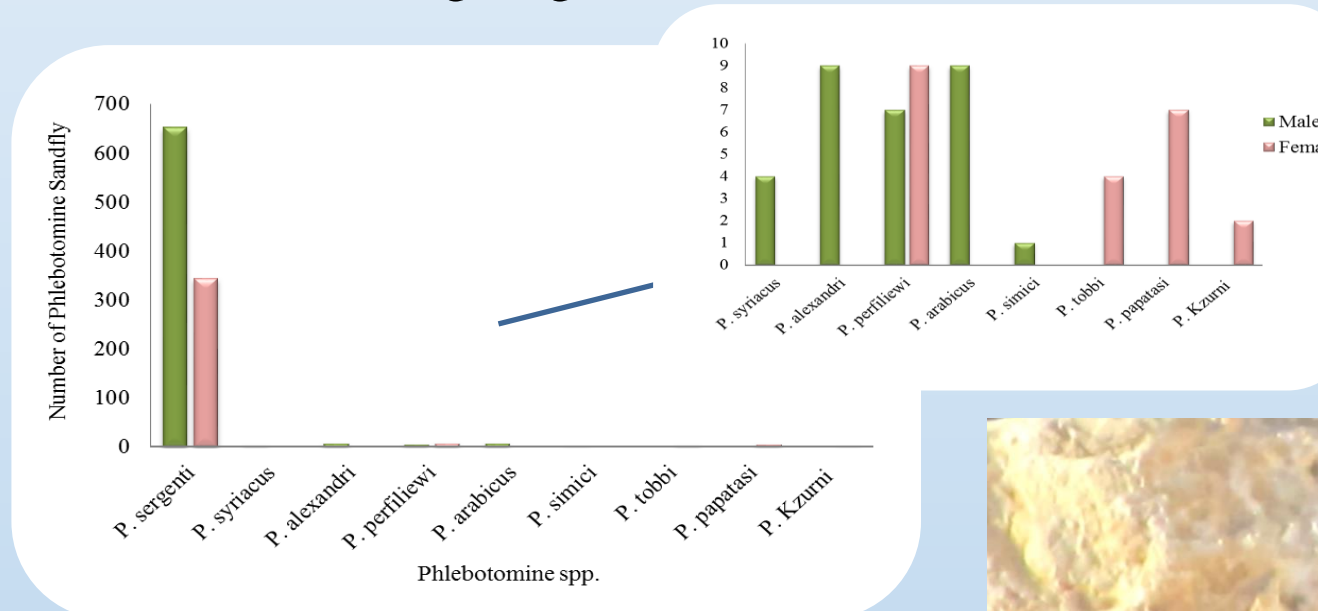


- Blood meal analysis was conducted using Cytochrome b PCR followed by reverse-line blotting (RLB)

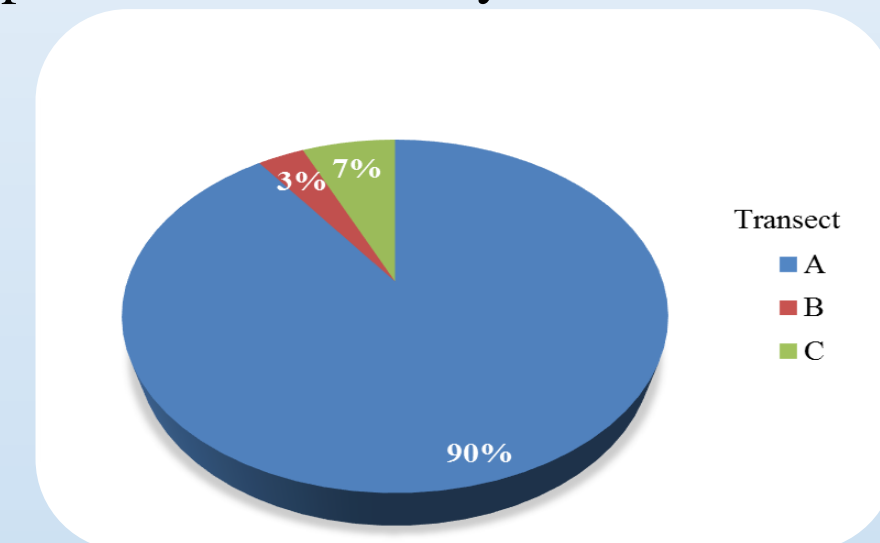


RESULTS

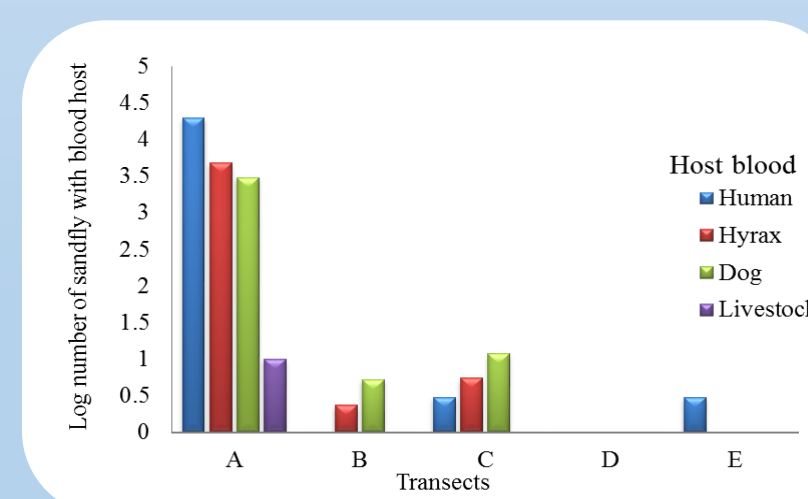
Male and females differed with respect to their distribution among transects, with *P. sergenti* occurring in greatest abundance.



Most flies infected with *L. tropica* were captured close to the hyrax colonies



P. sergenti engorged with human, hyrax, and dog blood correlated with transects



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CONCLUSIONS Living next to the city edges and facing the wadies, being adjacent to open green areas, and being close to host colonies of hyrax increase the exposure to infected vector (sand-fly). Knowledge of sand fly distribution can allow us to identify areas of greater risk of infection and to focus efforts in particular areas to control sand flies and encourage modes of behaviors among local residents that increase personal protection.