Poster 15

Geographic Distribution and Eco-biology of wild *Triatoma infestans* in Bolivia.

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Introduction: In spite of numerous reports of wild foci of *Triatoma infestans*, mainly in Bolivia, but also in Argentina, Paraguay and Chile, the eco-biology of wild *T. infestans* is still poorly known.

Objectives: This communication aims at describing the geographic distribution of wild *T. infestans* and some biological characteristics of these populations in Bolivia.

Methodology: A systematic search of wild foci of *T. infestans* was developed in 7 ecoregions of Bolivia, linking environmental variables that contributed to the actualization of a predictive map of the geographic distribution of *T. infestans.* In one Andean site (a landscape modified by human activities in a valley of the La Paz Department), the method of capture-mark-recapture was applied monthly during one year for entomological surveillance of *T. infestans*. Also, the blood meals of bugs were determined through heteroduplex assay and sequencing.

Results: The discovery of 44 new sites of wild *T. infestans* identified in three ecoregions (Inter-Andean dry Forest, Prepuna and Gran Chaco) showed a discontinuous distribution between Andes and lowlands. Habitats were mostly in rock-piles in Andes, and arboreal in Gran Chaco. New habitats were described in Inter-Andean Dry Forest. In Andes, slight quantitative variations of triatomines between captures were observed among seasons; rain being a factor of mortality. The capture-mark-recapture method recorded significant displacements of nymphs and adults and longevity. Wild populations were heavily infected with *T. cruzi,* mostly belonging to the DTU TcI. Of 114 blood meals identified, 8 wild mammal species were detected, two of them being the principal ones and potential reservoirs. Also 27 human blood meals were detected suggesting the possibility of *Trypanosoma cruzi* transmission outside the man's house.

Conclution: The wide distribution of the wild populations of *T. infestans* in Bolivia has been demonstrated, especially in the Inter-Andean Dry Forest. The preliminary description of some

eco-biological characteristics of these populations contributes to the understanding of the epidemiological risk of wild *T, infestans* in the context of Chagas disease.

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II WORKSHOP INTERNACIONAL DE LA ENFERMEDAD DE CHAGAS, VECTORES TRIATOMINOS, *Trypanosoma cruzi* Y TRIATOMA VIRUS

LIBRO DE RESÚMENES

Del 17 al 20 de SEPTIEMBRE DEL 2012

COCHABAMBA - BOLIVIA

II International Workshop on Chagas Disease, triatomine vectors, *Trypanosoma cruzi*, and Triatoma virus

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In memoriam of Dr François Noireau

Facultad de Medicina, IIBISMED-CUMETROP, Universidad Mayor de San Simón, Cochabamba, Bolivia

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Workshop objectives

• To inform interested stakeholders about the current Chagas disease burden and control strategies.

• To discuss current and future methods and technologies oriented to control triatomines and other insect vectors.

• To get feedback from associations, industry sector, and research organizations about using *Triatoma* virus as biological control agent.

• To assess research needs and cooperation opportunities between scientists working on human and animal trypanosomiasis, insect vectors and viruses.

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