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► To cite this version:

Karine Huber, Nathalie Vachery, Rosalie Aprelon, Thierry Lefrancois, Frederic Stachurski, et al.. Phylogeography of *Amblyomma variegatum* (Acari: Ixodidae), the main vector of *Ehrlichia ruminantium*: preliminary results. 5. International congress of Vector Ecology, Oct 2009, Antalya, Turkey. , 2009. hal-02820077

HAL Id: hal-02820077

<https://hal.inrae.fr/hal-02820077>

Submitted on 6 Jun 2020

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Phylogeography of *Amblyomma variegatum* (Acari: Ixodidae), the main vector of *Ehrlichia ruminantium*: preliminary results

Karine Huber (karine.huber@cirad.fr), N. Vachieri, T. Lefrançois, F. Stachurski, D. Martinez

UMR 1309 CMAEE, CIRAD, Campus International de Baillarguet, TA A-15/G , 34398 Montpellier cedex 5, France

Abstract

The hard ticks *Amblyomma variegatum* is the main vector of *Ehrlichia ruminantium* the pathogen responsible for heartwater or cowdriosis, a disease of ruminants. This tick originates from sub-Saharan Africa and is now widely widespread. In Africa, *A. variegatum* occurs south of the Sahel area, right across the continent from Senegal through West Africa, the Central African Republic, southern Sudan and Ethiopia to the extreme north-western tip of Somalia. *A. variegatum* has been described for the first time in Madagascar in 1899, but its introduction is probably older and very likely concomitant with livestock introduction from Africa. *A. variegatum* has also been described in the Comoros, Mayotte, La Reunion and Mauritius islands. *A. variegatum* was probably introduced in the Caribbean area in the middle of the 18th century through cattle trade. Antigua and Guadeloupe islands were colonized first. Then quite all the islands of the Lesser Antilles were colonized as well as the Greater Antilles. A phylogeographic approach will be carried out at an intra-specific level with the aim to have an insight of the historical genetic and demographic phenomenon leading to the present distribution and the genetic structuring of the vector population. The polymorphism of three mitochondrial-DNA genes (cytochrome b, cytochrome oxidase I and 16S rDNA gene) has been study. Samples coming from Africa (Mali, Burkina Faso, Tchad), from Caribbean area (Guadeloupe, Marie-Galante, Antigua) and the Indian Ocean islands (Comoros, Madagascar) were analysed. The preliminary results seemed to be in keeping with the historical data concerning the introduction of the tick in the different areas. This study will help to elucidate the history of the introduction of *A. variegatum* in the different Indian Ocean Islands and in the Caribbean area.