

Phylogeography and Demographic History of *Amblyomma variegatum* (Fabricius) (Acari: Ixodidae), the Tropical Bont Tick

Abstract:

The genetic diversity of *Amblyomma variegatum* (Fabricius) from four Caribbean islands and five African countries was compared by analyzing the sequences of three gene fragments, two mitochondrial (12SrDNA and D-Loop-DL), and one nuclear (intergenic transcribed spacer 2 [ITS2]). Genetic variability of the ITS2 DNA fragment consisted of only uninformative single nucleotide mutations, and therefore this gene was excluded from further analyses. Mitochondrial gene divergences among African populations and between Caribbean and African populations were very low. Nevertheless, the data suggest that *A. variegatum* is divided into distinct East and West African groups, the western group including all Caribbean samples. Phylogenetic analyses of the 12SrDNA and DL gene sequences showed that the West African *A. variegatum* clustered in a well-supported monophyletic clade, distinct from eastern paraphyletic lineages. Sequences of *A. variegatum* from the Caribbean were embedded in the West African clade, which supports the known West African historical origin for these ticks.