

Review of: "Assessing risk of vector transmission of Chagas disease through blood source analysis using LC-MS/MS for hemoglobin sequence identification"

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I find this article fascinating. A detective story, if you will. The senior author, Dr. Stevens, has been studying the digestive contents and spatial distribution of triatomines for years with ever more accurate methods. This paper describes the latest technique of detecting the animal origin of blood meal hemoglobin peptides found in triatome gut segments and relating them to the environment where the bug was found. The study was carried out in rural Guatemala. The authors draw several interesting conclusions in the discussion. One comment struck home to me. The authors mentioned that there is high mobility of bugs within the village they studied (inferred from bugs that fed on cows that were great distances from the point of capture of the bug). My collaborator (Justin O. Schmidt) and I have observed *Triatoma recurva*, similar in size to the *T. dimidiata* studied by the authors, in the field walking about in daylight undisturbed. They moved at a rapid pace and could easily cover several hundred yards in minutes; furthermore, they are known to fly up to a mile at night. So, distances bugs may travel between meals may be much more than is generally contemplated. In the vivarium where we normally see them, they are very sedentary except when feeding.

Although I suspect this technology will not become field deployable, it will remain an important research tool regarding bug feeding behavior. Data such as they have shown will be important contributions to bug control.