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Kamuela E Yong*, kamuela.yong@asu.edu, and **Anuj Mubayi** and **Christopher Kribs-Zaleta**. *Estimating biting rates of Trypanosoma cruzi infected triatomine vector species on preferred sylvatic hosts in Texas.*

The parasite *Trypanosoma cruzi*, spread by triatomine vectors, affects over 100 mammalian species throughout the Americas, including humans, in whom it causes Chagas' disease. In the U.S., only a few cases have been documented of human infection by vectors, but prevalence is high in sylvatic hosts (primarily raccoons in the southeast and woodrats in Texas). The sylvatic transmission of *T. cruzi* is spread by the vector species *Triatoma sanguisuga* and *Triatoma gerstaeckeri* biting their preferred hosts and thus creating multiple interacting vector-hosts cycles. The goal of this study is to quantify the number of contacts between different host and vector species in Texas from an agent-based model framework. The contact rates, which represent bites, are required to estimate transmission coefficients, which can be applied to models of infection dynamics. (Received September 25, 2012)