Chagas disease, caused by the parasite *Trypanosoma cruzi* and transmitted by over 100 species of triatomine "vinchuca" insect vectors, is one of the most prevalent infectious diseases in Latin America. *Triatoma infestans* is the vector responsible for most human infection in Bolivia, the country with the highest infection rates in the world. To test the hypothesis that Chagas control programs reduced the prevalence of parasite infection in the vector, I will compare prevalence in a sample of *T. infestans* collected from Zurima, Bolivia in 2002 with a sample collected in 2010. Using primers specific to the DNA sequence of *T. cruzi*, DNA extracted from the abdomens of *T. infestans* is amplified using qualitative PCR (qPCR), and melt-curve analysis determines the infection status. This assay found 80% of vectors collected in 2002 were infected with *T. cruz*i. Preliminary data suggest only 20% of vectors collected in 2010 are infected with the parasite. Fifteen samples will undergo DNA sequencing to confirm the PCR products are *T. cruzi*. The data on infection rates will be combined with microsatellite data from previous research to investigate why so many fewer insects are infected with the parasite.