Southern Arizona Town: Homes Colonized by Kissing Bugs. Is Chagas Disease Being Transmitted?
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**Background**
Bisbee, Arizona is a small mining community established 1880. It is located 11 miles from the United States-Mexico border, with a total population of 5,500 residents.

Homes in this town are colonized by kissing bugs (Triatoma recurva, T. rubida, and T. protracta).

These kissing bugs are known to harbor Trypanosoma cruzi.

**Objectives**
We wanted to assess whether these residents, who are being bitten by kissing bugs, are being infected with T. cruzi.

**Methods**
Our team recruited participants who live in Bisbee, AZ, who had been bitten by kissing bugs to participate.

Home survey’s were completed to assess for environmental and structural risk factors

June 2017 – June 2018

A total of 22 individuals from 17 households were included in this initial analysis.

**Results**
Kissing bugs were collected and provided through our citizen science project

Kissing bugs (N=117) harboring T. cruzi

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<thead>
<tr>
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<th>N=70</th>
<th>N=36</th>
<th>N=11</th>
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<tbody>
<tr>
<td>Triatoma recurva</td>
<td>31.4%</td>
<td>18.2%</td>
<td>16.6%</td>
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<tr>
<td>Tr. rubida</td>
<td>68.6%</td>
<td>81.8%</td>
<td>83.4%</td>
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</table>

All 22 participants tested negative for serologic evidence of T. cruzi infection.

**Knowledge and Attitudes of Kissing Bugs**

Participants rated their frustration with kissing bugs in their home on scale of 1-10 (10 being most frustrated) revealing a mean rating of 6.6; with 9 individuals rating a 10.

**Discussion**
Despite exposure to T. cruzi positive kissing bugs among these household residents, some having sustained hundreds of bites throughout the years, we do not have evidence of transmission of Chagas disease in Bisbee, Arizona.

**Inclusion criteria:**
- Bitten at least 1 time from kissing bugs
- Domestic exposure to kissing bug
- Provide kissing bugs from home
- Complete home survey evaluation
- Agree to point-of-care Chagas testing (Chagas Detect™ plus Rapid Test, InBios International, Inc.)

A total of 22 individuals from 17 households were included in this initial analysis.

Participants made a successful identification of at least one triatomine, and 90.9% were able to correctly identify in a photo line-up of 5 similar insects.

Changed sleeping patterns due to kissing bugs

75.0% of participants made a successful identification of at least one triatomine, and 90.9% were able to identify T. recurva, when asked to correctly identify in a photo line-up of 5 similar insects.

Participants rated their frustration with kissing bugs in their home on scale of 1-10 (10 being most frustrated) revealing a mean rating of 6.6; with 9 individuals rating a 10.

All 22 participants tested negative for serologic evidence of T. cruzi infection.