

Triatomine (Kissing) Bug Guidance for Local Health Departments

We have received several inquiries from local health departments about recent media coverage discussing the Triatomine bug, commonly referred to as the “kissing bug,” and its possible link to Chagas disease here in Kentucky.

Chagas disease, or American trypanosomiasis, is caused by the parasite *Trypanosoma cruzi* (*T. cruzi*). Chagas disease is endemic in many parts of Mexico, Central America, and South America, and has been associated with substandard living conditions in impoverished areas of those countries. Kissing bugs are blood-sucking insects that feed on both humans and animals and they can be infected with *T. cruzi* when feeding on infected animals. Chagas disease is then passed to humans through breaks in skin or mucous membranes, particularly as feces deposited at the site are scratched into the bite wound. Although, 11 species of the kissing bug have been documented in the central and southern parts of the United States, Kentucky is known to have only one species, the *T. sanguisuga* or eastern conenose, which is seldom encountered. While these insects are relatively widespread across the United States, locally acquired transmission of Chagas is considered extremely rare. Less than seven (7) cases have ever been documented in the US.

Infection with Chagas can manifest itself as a sudden (acute), brief illness, or a long-lasting (chronic) condition, and symptoms can range from mild to severe. The acute phase of Chagas disease can last for weeks or months, and is often symptom-free. When signs and symptoms do occur, they are usually mild and may include: swelling at the infection site, fever, fatigue, rash, body aches, eyelid swelling, headache, loss of appetite, nausea, diarrhea, vomiting, swollen glands, and enlargement of the liver or spleen. Signs and symptoms that develop during the acute phase usually go away on their own, but if left untreated the infection may persist and in some cases advance to a chronic phase, which can be more debilitating or even life threatening. The Triatomine insect closely resembles other more common bugs such as the wheel and leaf footed bugs, a fact that has led to misidentification and unnecessary concern about their prevalence in our area.

We believe the sudden interest in Chagas Disease and the Triatomine insect stems from the misconception that the presence of these vectors in the United States is a new discovery. This is not the case. According to the University of Kentucky Dept. of Entomology, Kentucky, like most other states, has at least one species of the insect present and this has been widely known for some time. Further, despite the fairly widespread distribution of the vector around the country, there is a very low incidence of locally-acquired infection and there has never been any locally-acquired transmission of Chagas disease reported in Kentucky.

In an effort to prevent or correct misconceptions, we suggest using only reliable educational resources when sharing information with the public. We recommend the following sources:

CDC's Chagas webpage at <http://www.cdc.gov/parasites/chagas/index.html>

The Informational Flyer put together by Dr. Lee Townsend with the University of Kentucky Entomology Dept. (see attached file)

Kansas School Naturalist "Kissing Bugs in the US" abstract, found at <http://www.emporia.edu/ksn/v57n2-spring2011/>

Points to emphasize when talking with the public:

- There is an **EXTREMELY** low risk of acquiring Chagas disease from the "kissing bug" here in the United States. Only seven (7) cases have ever been documented in the entire US, and none in Kentucky
- Not all Triatomine bugs carry disease; only Triatomine bugs infected with the *Trypanosoma cruzi* parasite have the potential to cause Chagas.
- The triatomine bug has been present throughout much of the US for many years without increased disease occurring.
- Chagas disease is endemic in parts of Mexico, Central and South America and is most often associated with substandard living conditions not normally encountered in the US.
- Chagas disease is commonly a mild, self-limiting acute condition, which can sometimes progress to a more chronic debilitating condition, particularly in those who are immunocompromised.
- Risk factors for disease transmission include living in endemic areas of Mexico, Central and South America.

If your office is contacted by someone who believes they have encountered the Triatomine bug, or wishes to have an insect identified, we would recommend that you refer them to the local University of Kentucky Cooperative Extension Office Service.

If they insist on turning in Kissing Bugs to local public health, which is recommended in some media stories, you may dispose of the insect in any way you deem appropriate. We do not believe there is any undue risk to the LHD staff in destroying these insects.

Kissing bugs are in the news in stories that imply recent discoveries. However, these insects are relatively widespread. At least 11 species occur in the US, most are limited to southwestern states (Fig 1). The eastern bloodsucking conenose bug (ECN) (*Triatoma sanguisuga*) (Fig 2) is most widely distributed species. However, encounters with humans in Kentucky are very rare. This insect is probably present throughout Kentucky but known encounters have been very rare. In the last approximately 30 years, the only documented specimens in the UK database have been from Adair, Caldwell, Fayette, and Franklin counties. All were found in homes or structures but no bites were reported.



Fig 1. States with reported and potential incidences of the kissing bug (CDC map).



Fig 2 Eastern bloodsucking conenose bug *Triatoma sanguisuga* (Photo by James Gathany, CDC)

The (ECN) typically inhabits wooded areas and hide in and around nests and burrows of wild animals. Adults can fly and are attracted to lights, which may account for some accidental home invasions. Others may come from bugs living with animals around homes and structures in rural, wooded areas. In rare cases where ECNs are found indoors, likely sources are pet resting areas or nearby rodent burrows or animal dens.

ECN hide during the day and feed at night on a variety of animals and humans. Bites on humans are often near the mouth or eyes. While the insects are called “deadly” the bites are similar to bad mosquito bites that tend to swell and itch for a time and clear. Health issues occur only if the bugs are carrying the

pathogen that causes Chagas disease, which is endemic in much of Latin America and has chronic, not acute effects. Bugs can acquire these trypanosomes from infected hosts (raccoons, chickens, rats, etc) but this is rare.

If you suspect you have found a kissing bug, capture it in a closed container and take it to your local Cooperative Extension Service. Here are two common Kentucky insects that can be mistaken for kissing bugs.



Fig. 3 The wheel bug belongs to the same family as the kissing bug. The shape and markings are similar but the wheel on the back of this predator is distinctive.



Fig 4. The leaf-footed bug has wide flat areas on its hind legs that make this sap feeder easy to recognize.