



# BUG BIZ

Pest Management and Insect Identification Series



## *Triatoma sanguisuga*, Eastern Blood-Sucking Conenose Bug (Hemiptera: Reduviidae)

Chris Carlton, Forest Huval and T.E. Reagan

### Description

Adults of the eastern blood-sucking conenose bug are relatively large insects three-quarters of an inch to seven-eighths of an inch (18 to 22 mm) in body length. The body shape and coloration of adults are distinctive. The elongated head narrows toward the front and is black with slender, six-segmented antennae and a sharp, three-segmented beak that folds beneath the head when the insect is not feeding. The triangular thorax is black with a narrow orange or pinkish-orange margin and a prominent, triangular black scutellum between the wing bases. The forewings are folded flat across the abdomen when at rest, and each forewing possesses a pinkish-orange, triangular patch near the base. The edges of the abdomen extend well beyond the wing margins and possess a bold pattern of alternating orange and black markings. The rounded sides of the abdomen are curved upward, making the entire abdomen slightly concave when viewed from above.



*Eastern blood-sucking conenose adult feeds on the foot of a mouse. Sturgis McKeever, Georgia Southern University, Bugwood.org.*

Immatures are similar in overall shape to adults, but the wings are absent on smaller, early stage individuals, and the color pattern is less vibrant. The wings appear as rounded pads at the base of the abdomen as the insects develop through their growth stages.

The eastern blood-sucking conenose bug is superficially similar to a number of other members of the family Reduviidae or even members of other families of Hemiptera. Positive identifications should be performed by

a professional insect diagnostician. At least nine members of the subfamily *Triatominae* occur in the U.S., most in the genus *Triatoma*, with additional species in Central and South America. The eastern blood-sucking conenose bug, *Triatoma sanguisuga*, is the most commonly encountered species in Louisiana, but it is not the only species that occurs in the state. Of 130 Louisiana specimens in the Louisiana State Arthropod Museum, 126 are *T. sanguisuga*, three are *Triatoma lecticularia* and one is *Triatoma gerstaeckeri*. These insects are often referred to as “kissing bugs,” a name that is used for the entire family *Triatominae*.

### Life Cycle

The eastern conenose and other kissing bugs are typically associated with mammal burrows, nests or other harborages of small mammals. They require a blood meal during each stage of development, thus the close association with mammals. This is in sharp contrast to other members of the family Reduviidae (assassin bugs), which are exclusively predatory on other insects. Feeding is accomplished by extending the beak forward and inserting it into a soft area of skin of the host, then sucking out the blood using strong muscles in the head to generate a vacuum. The process is facilitated by salivary enzymes that are injected to prevent clotting. The common name kissing bug refers to the habit of feeding around the tender tissue of the lips, although feeding is not restricted to this area of the host's body.

Development is slow and depends on the temperature and availability of hosts. As much as a year may be required for individuals to reach adulthood. Adults may live for up to six months. Females lay eggs throughout adulthood but require a blood meal between each period of egg laying. Almost any mammal can serve as a source of blood, including dogs, cats and, rarely, humans. Wild hosts in the southern U.S. are mainly racoons, armadillos, squirrels, rats and mice.

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## Ecological Significance and Pest Status

In Central and South America, several species of kissing bugs (i.e., *Triatoma infestans* and *Rhodnius prolixus*) are the principle vectors of a form of trypanosomiasis called Chagas disease, a debilitating parasitic disease. The causal agent is a flagellate protozoan, *Trypanosoma cruzi*, which belongs to the same group as the causal agents of sleeping sickness and a number of other infectious diseases of humans and other mammals. Chagas disease is a significant health problem in Central and South America. Vectors are common in various parts of the region, and housing conditions often allow cohabitation of both humans and small animals that are the primary hosts of the insects. Infections typically occur when the insects feed around the mouth or head, then defecate near the feeding site. The feces contain the infectious form of the trypanosome parasite that can be introduced to the body when scratched or rubbed into wounds, the eyes or other mucous membranes. This often occurs during sleep when the insects are able to feed undetected.

A great deal of media attention has been focused on the potential risk for Chagas disease in the U.S., and the information presented is often exaggerated or outright incorrect. The eastern conenose can vector Chagas disease, but, unlike its South American relatives, it tends to leave the host to defecate, thus reducing the probability of infection. The incidence of Chagas in humans living in the U.S. within the known ranges of kissing bugs is extremely low, with only 30 confirmed or suspected cases of endemic Chagas known or suspected from the U.S. through 2016. Nearly all of the often-cited 300,000 cases in the U.S. were contracted outside of the U.S. The low incidence of Chagas in the U.S. is due to several factors. The behaviors of the potential vectors in the U.S. differ from species in the tropics. They do not usually defecate while feeding and are not normally associated with human dwellings. Incidences of cohabitation of humans and other mammal hosts is much less common in the U.S. Thus, the risk of contracting Chagas in the U.S., while not zero, is extremely low. Certain situations increase the probability of coming into contact with conenose bugs that may be positive for the Chagas disease parasite. In Louisiana, some cases of infection in domestic dogs have been linked to kennel situations that promote population buildups of the insects. This is a serious veterinary concern because of the high mortality rates among dogs and the possibility of kennel workers coming in contact with the insects. Hunting

camp and rustic cabins that are not adequately sealed can be occupied by squirrels and small rodents that serve as hosts for conenose bugs. The insects are also attracted to lights and can enter homes that are not adequately sealed around perimeter lighting.

In addition to their status as potential disease vectors, some people have a significant local reaction to conenose bug bites similar to the far more common bites from bedbugs. Anyone who develops symptoms consistent with Chagas disease, especially those with a history of known contact with conenose bugs, should seek medical attention immediately. The disease is chronic, develops slowly and is incurable if left untreated.

## Control

Sealing structures, eliminating small animal habitats near structures and keeping outdoor lights off are the only practical control measures for blood-sucking conenose bugs. Individuals at risk of coming into contact with them (e.g., kennel workers and insect collectors) should be aware of their appearance and how to distinguish them from similar insects. Suspected conenose bugs should never be handled directly, even when dead. They may be moved or killed using forceps, cardboard or a fly swatter. Surfaces that may be contaminated with the insect's body fluids should not be touched prior to cleaning. Specimens submitted for identification should be preserved in alcohol or frozen in a sealed plastic bag and clearly labeled with the date, location of collection and other details that may be useful for correct diagnosis.

## References

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Author: Chris Carlton, Forest Huval and T.E. Reagan

William B. Richardson, LSU Vice President for Agriculture  
Louisiana State University Agricultural Center  
Louisiana Agricultural Experiment Station  
Louisiana Cooperative Extension Service  
LSU College of Agriculture



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