The Conenose Bug
(AKA “The Kissing Bug”)

One would not suspect that an insect with the congenial nickname of kissing bug could cause life-threatening allergic reactions (anaphylaxis) in sensitive individuals. But anaphylactic shock can be the result of the bite of Triatoma species, also known as the conenose bug, kissing bug, assassin bug, Mexican bedbug, and the Wallapai tiger. There are approximately 15 species of Triatoma in the U.S., but the most troublesome and numerous are found predominantly in Arizona, New Mexico, Texas, and California. (The name “kissing bug” actually refers to a South American species that usually bites its sleeping human victims on the lips.)

Identification
Adults are ½ to 1 inch (15 mm) long, brownish-black, broad, flat, but stout-bodied, with 6 reddish-orange spots on each side of the abdomen, above and below. It has an elongated, cone-shaped head, from which it derives its name. The beak is slender and tapered and almost bare. Its wings are normally folded across the back while resting or crawling and not usually noticed by the casual observer. Oval, pearly white eggs are laid singly from May to September, each batch laid after a blood meal. Nymphs have 5 instars usually requiring 1 year for the life cycle. The conenose will feed on any animal, including humans.

Habitat
The insect’s usual habitat is in or near the nests of packrats or other rodents. The conenose bug life history begins with the spring or summer nighttime dispersal flight of adults from rodent burrows and dens.

In suburban and rural Arizona, the insect is attracted to porch lights. At dawn, it looks for a place to get out of the sunlight and the heat. It may enter a residence through a doorway, gaps around doors and screens, or up from crawlspace under flooring. Once inside, the insect moves toward areas of low light intensity, hiding in and under furniture (between mattresses is a favorite hiding place) and in closets during the daytime hours. At night, the kissing bug ventures forth in search of a blood meal, which may be a sleeping pet or human.

Figure 1. Front and side views of Conenose Bug (Triatoma sp.) San Diego Natural History Museum website.

The Conenose Bite
The feeding bite of the conenose bug is painless because its saliva contains an anesthetic, and it usually occurs on those areas of the body not covered by close fitting clothes (Table 1). Victims are usually awakened by itching, swelling, rapid heart beat, or other reactive symptoms caused by the bite and not at the moment they are bitten. During the dispersal stage, Triatoma may bite people sitting outside in the suburban areas of Tucson. A full blood meal requires an average of ten minutes, and the numerous bites the victim sees may be due to a disturbance during feeding, which causes the insect to reinsert its proboscis, the tubular feeding structure.
Table 1. Features of the Conenose Bug Bite

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<td>1.</td>
<td>Individual awakens with unexplained nodules after unnoticed nighttime bites.</td>
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<td>2.</td>
<td>Bites are usually multiple and clustered on a single segment of the body.</td>
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<td>3.</td>
<td>Bites are usually distributed on areas of the body not covered by night clothes: shoulders, arms, neck, and face.</td>
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<td>4.</td>
<td>Lesions are larger, “itchier,” and more persistent than most insect bites.</td>
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<td>5.</td>
<td>Bites occur only at times when kissing bugs can be found in the bedroom, usually in late spring.</td>
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The most common reactions to the bite of the conenose bug are a redness of the skin, intensely itching swellings or reddened patches, and itching of extremities (palms of hands and soles of feet). Small bites may disappear in 24 to 48 hours, but larger ones persist as long as one week. Anaphylactic reactions may also occur, with weakness, sweating, nausea, abdominal cramping, vaginal bleeding, and vascular collapse. It should be noted that individuals who are bitten often develop a greater sensitivity to the bites.

Except in extreme cases, the treatment of individual bites is usually unnecessary, although the application of topical steroids or lotions containing menthol, phenol, or camphor may alleviate the itching. Anaphylactic reactions require immediate treatment, and sensitive individuals may be advised to keep a kit containing epinephrine and antihistamines in their bedroom. If you believe you have become sensitized to Triatoma bites, consult an allergist for specific treatments.

Immunotherapy is also an option developed by Jacob Pinnas, M.D., Allergy and Asthma Center of Arizona. This therapy may desensitize patients who are at risk for life-threatening allergic reactions to kissing bug saliva (an approach similar to that used for bee venom reactions). It is given as a series of allergy injections. It is offered only to patients at risk of serious reactions and only by referral from a physician.

Some species of conenose bugs are vectors of Chagas disease in Mexico, Central, and South America. This sometimes fatal disease, caused by a flagellate protozoan, has symptoms of swelling of the eyelids and face, loss of nervous control, high fever, anemia, and destruction of the cardiac and skeletal muscles. This disease is not known in the United States.

Control

An attempt should be made to reduce the number of kissing bugs present in and around the home. During daylight, the conenose seek dark places to shelter, so inspect outside — look beneath flower pots and outdoor furniture, especially that which sits nearly flush with the floor; any other dark, sheltered, hiding places should be investigated.

All cracks and openings into buildings should be sealed as completely as possible. Entry into the home does not require a large opening. Curtains should be drawn in lighted rooms at night. Inspect outside by the lights and windows before going to bed, as the conenose may already have made its appearance there. It is also a good idea to periodically examine dark, quiet areas in the home mid-spring to mid-fall, paying special attention to sleeping areas. A bed net, tucked in, is the best exclusionary device to use while sleeping for those sensitized and at risk for anaphylactic shock. In the event of a reaction to a conenose bug bite, call Arizona Poison Control at 520-626-6016, your primary care physician, or 911. Time is important to avert a life-threatening reaction in sensitive individuals.

Outside, look for rodent nests around an infested home. After removing any rodents from the nest, destroy the nest. Destroy only those nests close to the dwelling. By leaving distant nests intact, the kissing bug has an alternative site to inhabit; this may discourage migration into the home. Complete cleanup of nest sites near the home means plant materials must be removed. Make an inspection of the nest site(s) you have destroyed and remove any kissing bugs that remain. Spray the remains of the destroyed nest(s) with a short residual insecticide (e.g., Malathion) or contact a pest control company to spray the nest(s) to ensure all kissing bugs have been eliminated at those sites.