

Bat Bugs and Bat Ticks

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Each spring through autumn, clients bring bat ectoparasites to University of Nebraska–Lincoln Extension offices for identification. Clients consist of homeowners, apartment dwellers, housing managers, office workers and pest control professionals. The presence of these ectoparasites — bat bugs and bat ticks — indicates the likelihood of an active bat infestation inside the structure.

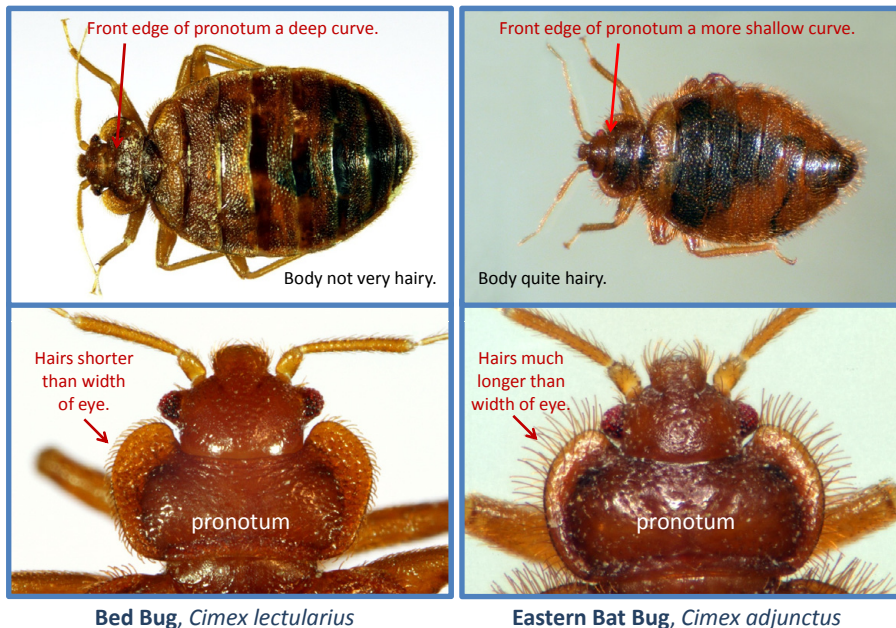
Bats are nocturnal and often roost during the daytime in attics or wall voids. They also may roost behind window shutters or vents on the exterior part of the house. In early spring, it is possible bats hibernating over the winter months will evacuate the premises, leaving their parasites behind. In both cases, where bat parasite populations have become excessive or when bats evacuate their roosts, these hungry parasites will wander, looking for warm-blooded hosts to feed upon.

Bat Bugs

In the United States, there are more than a dozen species of bugs whose primary hosts are bats or birds. The most likely species found inside bat-infested structures and easily confused with bed bugs is the eastern bat bug, *Cimex adjunctus*. The human bed bug, *Cimex lectularius*, and eastern bat bug are the same size and look so similar a microscope or hand lens is needed to confidently tell them apart. Bat bugs are much more hairy than bed bugs, and their hairs are much



Figure 1. Comparison of the human bed bug, *Cimex lectularius* and the eastern bat bug, *Cimex adjunctus*.



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longer as well. One way to remember this is bats are hairier than humans. Refer to Figure 1, for key features which distinguish the eastern bat bug from the human bed bug.

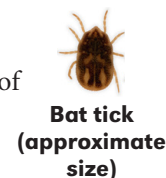
It's important for pest control professionals to recognize the difference between bat bugs and bed bugs, because there is a vast difference in management and expense. The relatively simple solution to bat bug infestations is removal of the bats and making alterations to exteriors of structures to exclude them. Elimination of bed bugs, however, is much more involved and complicated.

While bat bugs feed on blood from bats, they will feed on humans

and other warm-blooded animals when forced to wander in the absence of their normal hosts. Feeding on humans produces bite reactions such as swelling and intense itching and is an annoyance, but it is not dangerous — bat bugs and bed bugs are not known to transmit any diseases.

Bat Ticks

Bat ticks are a type of “soft” tick. Soft ticks look quite different from the more-commonly recognized “hard” ticks prevalent in grasslands or wooded areas. Soft ticks prefer dry areas and



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are capable of living for many years in the absence of a host.

One species of soft tick closely associated with bats is the bat tick, *Carios* (formerly *Ornithodoros*) *kelleyi* (Figure 2). Bat ticks are not very common, but can occasionally be found in houses and buildings infested with bats. They hide in cracks and crevices in bat roosting areas and feed on the blood of their hosts while they are roosting. If the bats abandon a roost, are removed or if populations decline for some other reason, the ticks become hungry and start to wander about in search of another host. This is when they are usually noticed. Like bat bugs, bat ticks prefer to feed on bats but will bite or feed on other animals, including humans, if bats are not available.

Control of Bat Bugs and Bat Ticks

Controlling bat bug and bat tick infestations in structures requires eliminating bats. This is largely accomplished by sealing cracks and holes,

Figure 2. Dorsal and ventral views of an adult bat tick, *Carios* (formerly *Ornithodoros*) *kelleyi*. The adult bat tick is about 3/8-inch long, with a granulated, warty-looking body,



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but structural modifications may also be necessary which discourage attractiveness for bat roosting. The best time to seal bats out of a building is late summer and fall, after the breeding season is over and bats have migrated to their wintering quarters. In addition

to eliminating and excluding bats, it may be helpful to apply a residual insecticide to bat roosting areas and other places where bat bugs or bat ticks have been observed.