

Insec(tc)ure*:

Are you insecure about your insect cures?

A UT Urban IPM Lab Newsletter for the Pest Management Industry

Turkestan cockroaches

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Figure 1. In late June, a house mouse had consumed several insects but the remaining evidence was insufficient to identify.



Figure 2. Nearly 3 months later, these insects were found on a glue board nearby.

I received the image in Figure 1 from one of my technicians when I was out of town in June 2017. She was relaying the message that one of our offices had mice, but I was more interested in the insects on the glue board. Unfortunately, the mouse had eaten parts of the insects, and we couldn't identify them. Luckily, we found these specimens on a glue board across the hall three months later (Figure 2). What looked like two cockroach species was one. The Turkestan cockroach, *Blatta lateralis* (Walker), is sexually dimorphic. The males are about 1.2 inches long, light brownish orange with a pale border on the pronotum and the anterior exterior edge of the forewing (Figure 3). Females are dark, broader than males and have vestigial wings with a light border on the outer edge (Figure 4).



Figure 3. Male Turkestan cockroach.



Figure 4. Female Turkestan cockroach

Turkestan cockroaches are not native to the U.S. and are from a sizeable area of the Middle East, from North Africa to Central Asia. In the U.S., *Blatta lateralis* was first found at an army depot in California in 1978 and an army post in El Paso, Texas, a year later. Subsequent infestations were found in several locations in Arizona and around schools in Los Angeles, California. In 2005, they were reported from an East Coast military base in Georgia. Thus, the initial introductions were blamed on military transport. This species is now found in many other locations, most likely due to its use as a food for insectivorous pets, its ease of rearing (it can't climb slick surfaces like other cockroaches) and its availability online.

In the southwestern U.S., the Turkestan cockroach is displacing the Oriental cockroach and has been reported from in-ground boxes (water meter, cable and irrigation), expansion joints, hollow blocks and under the pavement. Both species can be found in the same microhabitat, so it is imperative to look closely to identify the species. Female Oriental cockroaches are similar to the Turkestan cockroaches, but the Oriental lacks the pale wing border. Male Oriental cockroaches are dark and the wings fail to reach the end of the abdomen, whereas male Turkestan cockroaches are tawny and the wings surpass the end of the abdomen. Immature Turkestan cockroaches have a reddish-brown head and part of its thorax, while the Oriental is uniformly dark.



Figure 5. Seventeen first instar *B. lateralis* emerged from an ootheca.

Five nymphal instars occur with *B. lateralis* compared to 7 – 10 for *B. orientalis*. Because there are fewer nymphal instars, total nymphal development time is shorter in *B. lateralis* (118 – 137 days vs. 279 – 533 days). Female Turkestan cockroaches produce more oothecae (25 vs. 5- 10) and live longer than Oriental. Seventeen first instars emerged from the oothecae we found (Figure 5), which is right on target at the average of 16.8. Because the Turkestan cockroach reaches the adult stage sooner than the Oriental and produces more oothecae, the Turkestan cockroach can easily outproduce the Oriental and obtain larger populations more quickly.

Although the building where we first detected *Blatta lateralis* has been demolished, according to Facility Services, *B. lateralis* is still found in several other locations on the University of Tennessee campus and often in rodent bait stations. I suspect you'll find the Turkestan cockroach elsewhere in Tennessee if you look. Treat or remove suspected harborage if the Turkestan cockroach is found in an account. Assess the population size. If it's greater than the typical Oriental cockroach population, you'll need to modify your approach and use more bait.

Reference:

Kim, T. and M. K. Rust. 2013. [Life History and Biology of the Invasive Turkestan Cockroach \(Dictyoptera: Blattidae\)](#). Journal of Economic Entomology. **106** (6): 2428–2432.

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