

Insec(tc)ure*:

Are you insecure about your insect cures?

A UT Urban IPM Lab Newsletter for the Pest Management Industry

Advice for Submitting Digital Images for Urban Pest Identification

Karen Vail, UT Entomology & Plant Pathology

Pest specimens submitted by pest management professionals (PMPs) to my Urban IPM Lab at the University of Tennessee are more likely to arrive via email or text message these days rather than in a plastic vial mailed to the Department of Entomology and Plant Pathology. This shift to digital identifications started before the pandemic hit, but digital submissions make up the majority of my pest inquiries since then. I'm still working from home, so this is the quickest way for me to identify a pest, but there are some tricks to follow that will make this a more pleasant experience for all involved and provide a more accurate identification.

1. List the pest's size, or, better yet, take the photo of the pest next to a ruler, coin or other objects of known size (Fig. 1).
2. Send a sharply focused image. I have photo-enhancing software that can somewhat correct color and contrast, but I can't improve resolution.
3. Smartphone cameras are amazing and each new version seems to improve the resolution, but many don't perform well in low light. So if you're taking a photo in a crawl space, you'll need to ensure you use a flash and possibly supplemental lighting.
4. Use a smartphone clip-on macro lens that will allow you to zoom in. You can get these for \$15 or less online (Fig. 2).
5. Take images of the top, bottom, and sides of the pest.
6. Take tons of photos and only send me a few of the best.
7. Send photos of the damage, pest evidence (exit holes, frass, webbing, etc.) and the site the pest was collected from.
8. Send photos of the life stages (eggs, larvae or nymphs, pupae, and adults) present.
9. If pests occur in an aggregation, take a photo of the aggregation.
10. Please give me some context. In your email, describe the pest situation in as much detail as possible. The information provided in this description will help me narrow down the possible pest identification more quickly and keep me from wasting hours working through a general insect identification key. For instance, I received a submission of a small, white larva with no other information. I spent hours working through the keys to the immature insects before identifying it as a cat flea. If I had been given just the smallest description of the situation, I would have identified it very quickly.



Figure 1. Image of a moth or drain fly next to a pen cap to provide a size reference. Close up image of the drain fly. Note the hairs on the parallel wing veins. Photo credit: Tom Rison



Figure 2. Image of odorous house ants feeding on honey taken with an iPhone8 and a clip-on 2-in-1 camera lens by Pocket Lens. Photo credit: Karen Vail

I should say that the PMPs are still welcome to send me pests to identify through the mail at my address listed at the end of this newsletter. But please call me or send me an email to let me know it is on the way. Another option if you are in the Knoxville area is to drop specimens at Oldham Chemicals Company and I can pick it up on the way to campus as long as you'll tell me when it will be dropped off.

I offer pest identification for the pest management professional. Homeowners should submit their pests for identification to their local county Extension agent (<https://utextension.tennessee.edu/office-locations-departments-centers/>).

Remember: March 7 -13 is Termite Awareness Week. [PPMA](#) has created a toolkit you can use for your web and social media sites.

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