



## Pests and Pesticides in Child-serving Facilities: An IPM Newsletter

### Finding it Difficult to Control Indoor Ant Activity in the Winter?

Karen M. Vail

Ants nesting in structures through the winter can be quite challenging to control and can damage the pest management professional's reputation. Often the ant centers of activity are difficult to define because small numbers of ants are found in many different locations. One area is baited and activity ceases, only to be found in another area.

Several urban pest management specialists have been discussing this problem. Many believe the ants are not metabolizing as effectively as they do in the warmer times of the year. In fact, in the UT Urban IPM lab, we no longer conduct bait tests for odorous house ants after August.

A middle Tennessee pest management professional reports some success using Maxforce Quantum bait placed in a station in a protected indoor location that is out of sight of the buildings' occupants. He states, "Before I would have multiple sightings per day, after switching to this product I've had only 3 sightings in over two weeks." The PMP had tried many different baits and other products, so it is difficult to say what was responsible for the reduced Argentine ant activity. Could the bait applied in a station serve as a moisture source? Moisture is fairly limiting this time of year when indoor heat is running because of low outdoor temperatures. For example, the relative humidity of our UT lab was <20% during January.

While it is difficult to determine the cause of its success, it's certainly worth exploring the use of placing Quantum, or any other liquid/gel bait, in indoor stations near ant activity where school occupants would not see the station or trailing ants, nor have access to the station.



Argentine ant (left) and odorous house ant (right) are two of the ants commonly encountered indoors during Tennessee's winters. Credit: UT E&PP

### Special points of interest:

- > Controlling ants in the winter
- > Did this winter kill all of the fire ants?
- > Termite Webinar

*Have you been wondering if fire ant colonies have survived the 2013/2014 Tennessee winter thus far? Our predictions (<http://www.extension.org/pages/70330/extreme-temperatures-affect-fire-ants#.Uw4I1oU9TFk>) for January and February were correct. Hundreds of active fire ant mounds were found on UT grounds the week of February 24th.*

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## Has the Cold Weather Killed All the Tennessee Fire Ants?

Karen M. Vail



Fire ants collecting bait. Credit: K. Vail

Have you been wondering if fire ant colonies have survived the 2013/2014 Tennessee winter thus far? Our predictions (<http://www.extension.org/pages/70330/extreme-temperatures-affect-fire-ants#.Uw4I1oU9TFk>) were correct. Hundreds of active fire ant mounds were found on UT grounds the week of February 24th.

Fire ants will die quickly or supercool when exposed to temperatures in the Fahrenheit teens, but it's difficult to subject a colony to these temperatures. Fire ant workers will move the immatures and queen(s) within a mound to avoid temperature extremes and to take advantage of optimal ones. When temperatures drop, fire ants will move

farther below the surface to avoid the cold. At the University of Tennessee Trial Garden's weather station in Knoxville, the coldest temperature logged a foot below the surface thus far in 2014 was 37 degrees F. Ants a foot below the surface weren't subjected to lethal temperatures this season.

Continuous cold has impacted fire ant populations. For instance, when air temperature did not exceed 34 degrees F for five consecutive days in the 1990s, a majority of fire ant colonies were found dead in eastern Tennessee. In the first six weeks of 2014, twice we experienced three consecutive days during which air temperatures did not exceed 34 degrees F, but we haven't experienced the continuous cold temperatures needed to cause widespread death of fire ant colonies.

But don't lose hope. If the temperature drops rapidly and the ants are prevented from going deeper, they may not be able to avoid the cold. Sometime between February and April 2001, 70-75% fire ant colonies died in exposed pasture locations. Mounds protected along the grass/woods interface fared much better, probably due to the buffering effect of this environment. Dead ants were found 2 to 5 inches below the surface possibly indicating the ants were unable to escape the cold quickly enough. Extreme temperature fluctuations and saturated soils may have been responsible. During this time, warm temperatures in the day were followed by precipitous drops into the 20s at night. The wet ground may have prevented the ants from moving deep enough into the soil to prevent exposure to the cold, or the wet soil may have been less insulating than the dry. The bottom line is we won't know whether this winter will impact fire ant populations until spring is here, but the current outlook is good for the fire ant.



In April 2001, fire ants were found dead 2 to 5 inches below the surface. Credit: R. Pereira



## All Bugs Good and Bad

### 2014 Webinar Series



Photo Credit: USDA-ARS Photo Unit, USDA-ARS, bugwood.org

## Straight Talk About Termites

March 7, 2014  
2:00 PM EST

*Dr. Xing Ping Hu*

Please join us for this webinar series for information you can use about good and bad insects. Webinars will be on the first Friday of each month at 2:00 PM EST.

Learn how termites live and what you need to know to prevent them from recycling your stuff. This webinar will be presented by Dr. Xing Ping Hu, a Professor in the Department of Entomology and Plant Pathology at Auburn University. Moderated by Mallory Kelley, Regional Extension Agent, Alabama Cooperative Extension System.

For connection information, visit: <https://learn.extension.org/events/1371>.

For more information on the series visit:  
<http://www.extension.org/pages/70120>.



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Comments or questions  
 on this newsletter?  
 Contact [kvail@utk.edu](mailto:kvail@utk.edu)



Find us on facebook  
<http://tinyurl.com/UrbanIPMTN>

For more information about IPM in Tennessee schools and other facilities, or to view past issues of *Pests and Pesticides in Child-serving Facilities*, please visit [schoolipm.utk.edu](http://schoolipm.utk.edu) OR [utyeah.utk.edu](http://utyeah.utk.edu)

**NATIONAL IPM INFORMATION**  
 eXtension's Pest Management In and Around Structures: Urban Integrated Pest Management  
<http://www.extension.org/Urban%20Integrated%20Pest%20Management>

National School IPM  
[schoolipm.ifas.ufl.edu/](http://schoolipm.ifas.ufl.edu/)

IPM in Schools Texas  
<http://schoolipm.tamu.edu/>

IPM Institute of North America  
[www.ipminstitute.org/](http://www.ipminstitute.org/)

School IPM PMSP—all schools IPM by 2015  
[http://www.ipminstitute.org/school\\_ipm\\_2015.htm](http://www.ipminstitute.org/school_ipm_2015.htm)

National Pest Management Association IPM  
[http://www.whatisipm.org/schools\\_IPM.asp](http://www.whatisipm.org/schools_IPM.asp)

EPA schools  
<http://www.epa.gov/pesticides/ipm/>

For further information about the IPM program at your school or in your county, contact your county Extension Agent or the school IPM Coordinator. For county agent contact information, please visit <https://utextension.tennessee.edu/Pages/offices.aspx>

### Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

### Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.

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