

## ***Pest Management News***

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**Letter #1**

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### **Are Odorous House Ants Invading your Home?**

John D. Hopkins

The odorous house ant, *Tapinoma sessile* (Say), has become one of the most common pest ant species encountered in Arkansas. Often, obtaining adequate control of this ant can be quite difficult. The ant is small (1/8-inch in length), brown to black in color, has an unevenly rounded thorax, and forms distinct trails along outdoor and indoor surfaces.

Odorous house ants, when viewed from above, lack a noticeable node or “bump” along the constricted area between thorax and abdomen. When crushed between the fingers, odorous house ants emit an odor similar to that of a rotten coconut or resembling pine scent.

Odorous house ants will nest almost anywhere. Common outdoor nesting locations include under pavement, stones, mulch, woodpiles, or flower pots, and behind house siding. This ant will readily forage indoors for food and moisture. Nests can occur indoors within wall voids, inside or under appliances, potted plants, etc., especially near sources of moisture. Nests tend to be mobile and colonies can quickly relocate, often in response to changes in weather or physical disturbance.



Colony size can range from a few hundred individuals to more than 100,000. Odorous house ant colonies often contain many egg-laying queens and primary colonies may split into smaller ones for no apparent reason. Ants foraging indoors feed on all manner of foods, usually preferring sweets but also eat foods with high protein/fat content (meat, dairy products) depending on the colony needs at the time. Favorite food sources outdoors include honeydew produced by aphids, scales, mealybugs and other homopterous insects and plant nectar.

Control of invading odorous house ants can prove to be a particularly daunting job for the homeowner. Nuisance activity indoors can sometimes be reduced by removing ready access to food and moisture (water leaks, spillage, trash cans, pet food dishes, etc.) and by wiping away the ant's odor trails with a mild detergent. Entry points used by ants such as overhanging tree branches or shrubs should be cut away from the structure's roof and walls. Also, cracks and utility penetrations through the foundation/exterior walls should be caulked or otherwise sealed. Simply spraying an over-the-counter insecticide on trailing ants usually proves to be ineffective.

**Finding and treating the ant nest** is important if control efforts are to be successful in the long-term. To locate odorous house ant nests, investigate movement patterns and **DO NOT** disturb the foraging trail. Worker ants will often lead you back to the nest. Use small homemade bait stations (pill-bottle caps) baited with an appropriate bait to attract the ants and then track them back to their nest locations. Thoroughly treat ant nests with a homeowner labeled granular or liquid pyrethroid insecticide. Alternatively, homeowner labeled baits like Combat® Quick Kill Formula bait stations and Combat® Ant Killing Gel; Raid Ant Bait II, and Terro® Ant Killer II also tend to perform well. However, because odorous house ant colonies nutritional needs vary, you may find that the bait product you are using isn't attractive or doesn't seem to be working. If that is the case, try another bait product. Successful control using baits usually requires a sustained period of feeding, not just a brief visitation by a few ants.

When odorous house ants are the problem, homeowners may be better off calling a professional, although they, too, are challenged by this ant. Some very effective products (non-repellent insecticides and certain baits) used by professionals are not available for use by the general public.

**All chemical information is given with the understanding that no endorsement of named products is intended, nor is criticism implied of similar products that are not mentioned. Before purchasing or using any pesticide, always read and carefully follow the directions on the container label.**

## **Dow to Sell Sulfuryl Fluoride to Douglas Products**

John D. Hopkins

Dow Chemical Company will sell its Dow AgroSciences post-harvest and structural fumigant business (sulfuryl fluoride / brand names Vikane and ProFume), to Douglas Products. This transaction is expected to close in the second quarter of 2015 [Click here for more information](#). Vikane ([Click here for label](#)) is used as a structural fumigant. ProFume ([Click here for label](#)) is used as a fumigant to protect dried fruits, tree nuts, cereals/small grains and small grain processed products, food processing facilities, pet food facilities, warehouses, and shipping containers.

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# **Mosquito Precautions Following Recent Heavy Rains and Flooding in Arkansas**

John D. Hopkins

Most Arkansans know that mosquitoes present a biting nuisance and can also serve as vectors of disease. With that being said, standing water after heavy rains and flooding provides an excellent breeding place for mosquitoes. To help minimize the aggravation and potential disease threat from these biting insects (females mosquitoes only), regularly drain standing water, including water collecting in empty cans, tires, buckets, clogged rain gutters and saucers under potted plants. When outside, protect yourself with an insect repellent that contains DEET, picaridin, IR3535, oil of lemon eucalyptus, or para-menthane-diol (read active ingredient list on product label and always follow label directions). Finally, make sure door, porch and window screens are in good condition.



## **Pets and Ticks**

Kelly M. Loftin

Spring and summer are peak periods for tick encounters. Many have likely noticed ticks attached to their dogs, cats and livestock. This spring, I have removed several from my horses and dogs. We are all aware that ticks cause discomfort and annoyance to our pets but this is not the sole concern. Ticks can transmit numerous tick-borne diseases to our dogs and cats. Rocky Mountain spotted fever, ehrlichiosis, babesiosis, anaplasmosis, tularemia, hepatozoonosis and tick paralysis are some of the tick-borne diseases of dogs. In cats, the list includes ehrlichiosis, anaplasmosis, babesiosis, cytauxzoonosis (bobcat fever) and tick paralysis. Most of these tick borne-diseases are transmitted though the bites of pathogen infected ticks. However, some can be transmitted by other routes. Hepatozoonosis can be transmitted if a dog eats the disease-infected tick. Tularemia can be transmitted through the bite of an infected tick or through contact or ingestion of an infected animal. Tick paralysis (also called tick-bite paralysis) is not caused by a pathogen but a toxin found in saliva of specific tick species (*Dermacentor* spp.). This toxin can be injected into the animal during feeding, resulting in lower motor neuron paralysis. Only a very small portion of tick infested animals are afflicted with tick paralysis.

Several tick species readily feed on our pets. In addition, various life stages of ticks (larval (seed), nymph (yearling) and adult) will feed on dogs and cats. The lone star, American dog, black-legged, Gulf Coast and brown dog tick are found in Arkansas and readily attack pets. Our important tick species are primarily three host ticks. This means that each stage (larva, nymph and adult) feeds on a different host. This is an important factor in tick-borne disease transmission because the pathogen that causes disease is usually acquired by the previous stage feeding on an infected host. Each tick

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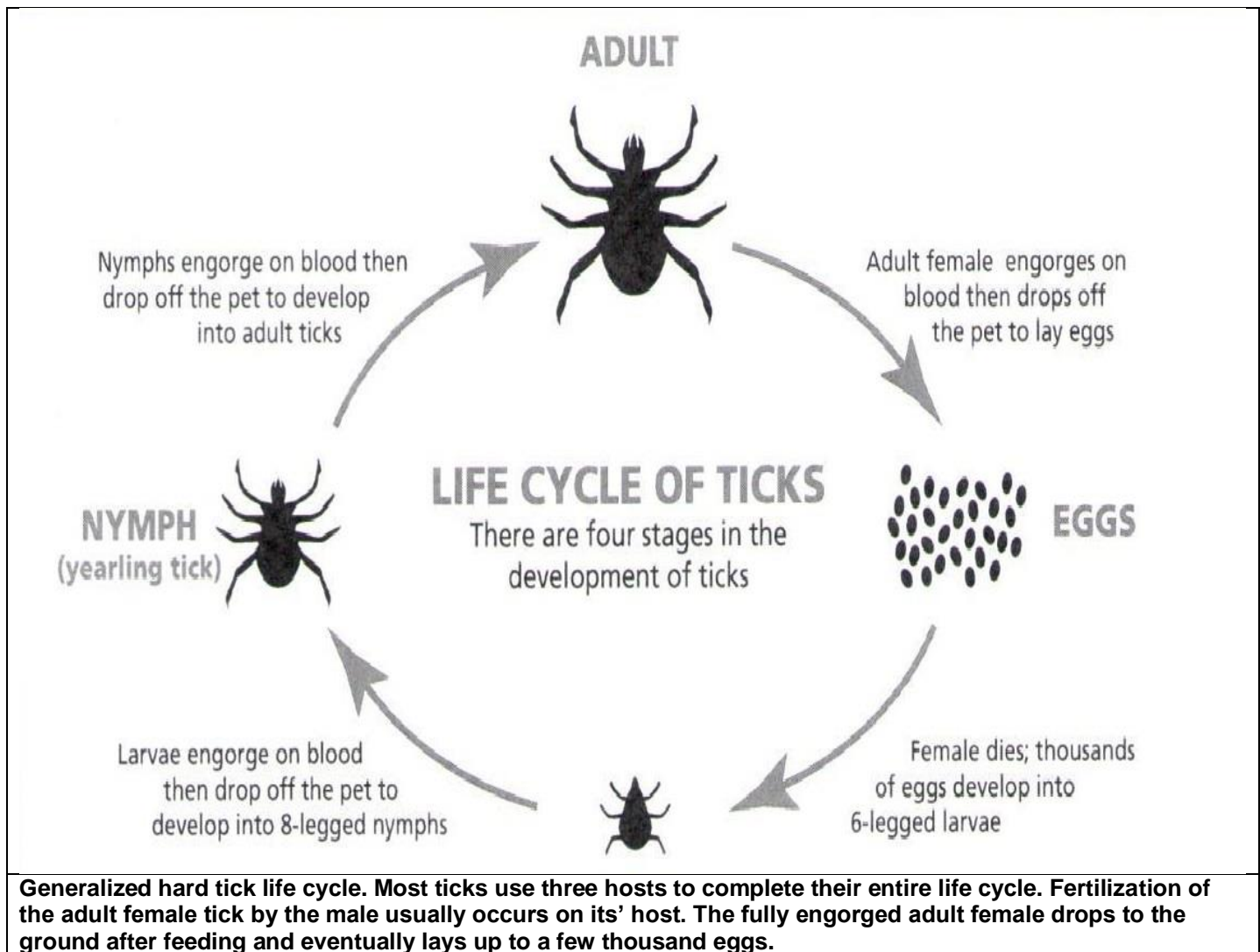
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stage is fairly distinctive. The larval tick is the tiny six-legged tick known by many as the “seed” tick. The tick nymph is the stage following the larval stage and is small (but bigger than the “seed” tick) and has eight legs. The nymph may also be referred to as the “yearling” tick. The adult tick is obviously larger than the nymph, has eight legs and is the reproductive stage.

Tick host preference varies somewhat depending upon tick species and stage. For example, immature lone star ticks generally feed on small- and intermediate-sized hosts (birds, rodents, coyotes, dogs, etc.) that inhabit the ground. Large host such as cattle, deer and horses generally serve as hosts for lone star adults. Host preference aside, lone star tick larva, nymphs and adults are opportunistic feeders and will readily feed on pets and humans. The American dog immature ticks generally feed on small mammals and adults on larger animals such as dogs, cattle, horses and humans.



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**Lone star tick (*Amblyomma americanum*) (adult male left, adult female right). (Mat Pound, USDA Agricultural Research Service, Bugwood.org)**



**American dog tick (*Dermacentor variabilis*) adult female (left) and adult male (right). (Gary Alpert, Harvard University, Bugwood.org)**

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**Brown dog tick female (*Rhipicephalus sanguineus*) (left) and male (right). (Mat Pound, USDA Agricultural Research Service, Bugwood.org)**



**Nymphs and adult stages of black-legged tick (*Ixodes scapularis*). Male (top left), Female (top right). (Jim Occi, BugPics, Bugwood.org)**

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**Gulf coast ticks (*Amblyomma maculatum*) (male left and female right). (Mat Pound, USDA Agricultural Research Service, Bugwood.org)**

Exposure of pets to tick bites can be significantly reduced by simply keeping your pets away from tick habitat. Two important factors affecting tick abundance are favorable habitat and host availability. In some situations and in small area we can reduce both habitat favorability and host availability. Ticks are less likely to inhabit frequently mowed areas of the yard. Fencing well maintained areas of your property not only keeps the dogs in but also helps keep wild tick hosts out of your yard. Keep in mind that shady areas of your yard with ample leaf litter provides the humidity necessary for tick survival. In some situation and in smaller yards where ticks are abundance and pets play, insecticide application to the yard may be considered. . However, protecting pets from tick bites may additionally involves some sort of acaricide or insecticide application to the pet. Also, it is important to check for and promptly remove attached ticks on a daily basis.

Insecticidal products are available to kill or repel ticks once they are on dogs or cats. Many of these products are topically applied as a spot-on and get both ticks and fleas. Examples of the active ingredients used in these products include fipronil, imidacloprid, permethrin, piperonyl butoxide, (s)-methoprene, moxidectin. In addition, tick and flea collars containing active ingredients such as propoxur, amitraz, permethrin and others are readily available. It is very important to use only products label for use on that pet. For example, do not apply a product labeled to control ticks and fleas on dogs, on your cat. Cats sometimes exhibit less tolerance to a specific chemical than a dog. The 2015 Insecticide Recommendations (MP 144) (<http://www.uaex.edu/publications/mp-144.aspx>) lists products used to control ticks on dogs, cats and in yards.

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## General Precautions and Prevention for Humans

1. Avoid tick-infested areas when possible. Tick-infested areas may include dense vegetation or tall grass, and the “edge” between open and forested areas.
2. Use tick repellents and apply according to label instructions. Insect repellents containing DEET or **clothing- only** repellents containing permethrin are most commonly used. Other repellents such as Bio UD (2-undecanone) have been effective in repelling ticks.
3. Find and remove ticks.
  - a. Check yourself, your children and pets frequently for ticks.
  - b. Wear light-colored clothing when in tick infested areas, as dark ticks are more easily spotted against a light background.
  - c. After returning home, thoroughly inspect yourself with aid of a mirror.
  - d. Parents should check their children for ticks under the arms, in and around the ears, inside the belly button, behind the knees, between the legs, around the waist, and especially in their hair.
  - d. Bathe or shower as soon as possible after returning from tick infested area to wash off crawling ticks and locate attached ticks.
4. Promptly remove ticks when found. If a tick is removed within a few hours after attachment, the chance of a tick transmitting a pathogen is greatly reduced.
  - a. Use clean, fine-tipped tweezers to grasp the tick as close to the skin’s surface as possible.
  - b. Pull upward with steady, even pressure. Don't twist or jerk the tick; this can cause the mouth-parts to break off and remain in the skin. If this happens, remove the mouth-parts with tweezers. If you are unable to remove the mouth easily with clean tweezers, leave it alone and let the skin heal.
  - c. After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol, an iodine scrub or soap and water.
  - d. Examine gear. Ticks can ride into the home on clothing and pets, then attach to a person later, so carefully examine pets, coats and day packs.
  - e. Tumble clothes in a dryer on high heat for an hour to kill remaining ticks. (Some research suggests that shorter drying times may also be effective, particularly if the clothing is not wet.)
5. Create a tick-safe zone in your yard (from Connecticut Agricultural Experiment Station's Tick Management Handbook)
  - a. Clear tall grasses and brush around homes and at the edge of lawns,
  - b. Place a 3-ft wide barrier of wood chips or gravel between lawns and wooded areas and around patios and play equipment. This will restrict tick migration into recreational areas.
  - c. Mow the lawn frequently and keep leaves raked.
  - d. Stack wood neatly and in a dry area (discourages rodents that ticks feed on).
  - e. Keep playground equipment, decks, and patios away from yard edges and trees and place them in a sunny location, if possible.
  - f. Remove any old furniture, mattresses, or trash from the yard that may give ticks a place to hide.
6. Know the symptoms of tick-borne disease. If you become sick and see a healthcare provider, alert them to any tick exposure.

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7. Insecticide application and habitat modification are methods used to reduce tick populations around the home. Follow all label requirements when applying insecticide. Consult the Insecticide Recommendations for Arkansas (MP-144 <http://www.uaex.edu/publications/mp-144.aspx>) for products labeled to use against ticks in residential and recreational areas. Consult your local Cooperative Extension Office for more information.

## **Important Turf Diseases in Arkansas**

Sherrie Smith

Spring Dead Spot, caused by *Ophiosphaerella* spp., is a disease found exclusively on Bermuda grass. It is the most important disease of Bermuda grass in North America. It occurs typically on Bermuda plantings three or more years old. The first symptoms are circular depressed areas prior to spring green-up. When the turf greens up, circular patches from 6 inches to 3 feet in diameter of dead, bleached grass appears. After several years, the centers of active patches may contain weeds or live

**Bermuda Spring Dead Spot- *Ophiosphaerella* spp.**



**Shawn Payne University of Arkansas Cooperative Extension Service**

Bermuda grass, with the patches taking the form of rings that can run together to form serpentine arcs. The roots and stolons will be severely rotted in these areas. Re-growth is extremely slow, and Bermuda that re-colonizes the dead areas remains stunted due to toxins produced by the fungi. Adequate control of Spring Dead Spot is mainly through cultural practices. Core aeration done in August or September, and practices that reduce soil compaction and improve drainage are recommended. Ammonium sulfate and potassium applications have been found to be helpful when applied in summer. Apply at least 1.0 lbs. of Potassium ( $K_2O$ ) per 1000 sq. ft. to turfgrass during June, July or August. Maintain pH in the range of 5.5-6.5. Fungicide treatments are not always effective. A fungicide such as Heritage 50WG, or Eagle 40WSP, or Rubigan, or Disarm 480SC, or ProPensity 1.3ME, used in the fall about 30 days before dormancy gives best results when paired

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with good cultural practices. Cultivars with good winter hardiness are less affected by Spring Dead Spot.

The biggest disease issue with Zoysia is Large Patch, caused by the fungus *Rhizoctonia solani*. Stolons and basal leaf sheaths develop water soaked black to reddish brown lesions. Irregular circular patches develop that may be from several feet to more than 25 feet in diameter. Sometimes a smoke colored or orange halo may be observed early in the morning at the margins of the patch. Diseased shoots are easily detached from their points of attachment. Roots are discolored but not rotted. In the most badly affected turf, entire lawns may be blighted. Large Patch is also a common patch disease of Bermuda, with symptoms occurring earlier in the spring than Zoysia. Typically, symptoms in Zoysia occur two to eight weeks after green up, or in the autumn. Sometimes symptoms slowly disappear during the growing season as surviving tillers start filling in the killed spots. Night irrigation, shade, and excessive amounts of nitrogen increase both severity and incidence of patch diseases. Complete fertilizers with time release nitrogen should be used instead of quick release nitrogen. Apply 0.5 pound of nitrogen per thousand square feet approximately three weeks after the grass turns green in late May. No more than two pounds of nitrogen total should be applied per growing season to Zoysia. A soil test is useful to see where fertility levels are. Good drainage is essential for a healthy lawn. The turf should be de-thatched if thatch accumulates to more than 0.5" thick. De-thatching should be done while grass is actively growing. Fungicides may be applied once in the spring between March 15 and April 15, and again in the fall between September 20 and October 10. Heritage, Prostar, Eagle, Instrata, and Bayleton are labeled for Large Patch. For large patch, soil test for pH and nutrients. Avoid night watering. Homeowners may use products labeled for control of *Rhizoctonia* diseases. Products containing azoxystrobin, or flutolanil, or mycobutanil, or triticonazole, or triadimefon have proven effective when applied per label.

**Zoysia large patch- *Rhizoctonia solani***



**Sherrie Smith University of Arkansas Cooperative Extension Service**

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## **Name That Weed**

Bob Scott

Unlike its name implies many biotypes of this species are cultivated. In addition to the purple flowers shown here it can also have yellow ones. A pasture weed in Oklahoma, Kansas and western areas of Arkansas, cows won't eat it. Be the first to email me the correct common name for this interesting looking pasture weed and win a prize! [bscott@uaex.edu](mailto:bscott@uaex.edu)



## **To The Readers**

Please offer any suggestions for Urban or Livestock Integrated Pest Management topics (insect pests, plant diseases, weed problems, wildlife control problems) that you would like to see – OR – feel free to submit an article that you have prepared. Kelly and I will be glad to include it (subject to editing). Send feedback to [jhopkins@uaex.edu](mailto:jhopkins@uaex.edu) or [kloftin@uaex.edu](mailto:kloftin@uaex.edu)

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