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## PRESIDENT'S MESSAGE:

Dear Valued Members:

As we work our way out of this Pandemic nightmare, it is still important to keep up on things that concern our livelihoods. For example, in this issue we have printed changes in the mosquito treatment laws, as amended by the Illinois Department of Agriculture. These changes are VERY important. Read "Barrier Treatments" I am fearful that many of you treat mosquitoes as if they were a part of regular pest control. Nothing could be farther from accurate. You need to be licensed, and that process happens yearly. Now there is an amended copy of the laws, which states that you need to provide 24 hour notification prior to treatment to your customers neighbors. Are you doing that? Read it well, because it is the law. Lawsuits can become expensive, especially to the operators that are obeying them but suffering because insurance is skyrocketing because of misuse and mistreating. It is important that we come out of this pandemic firing on all cylinders as an industry. As for GCPMA, the value of our board is immeasurable. These professionals volunteer their time so that the over 1100 certified operators in this region have the best and most accurate information and are providing the opportunity to educate so that services are performed correctly and new issues can be addressed. There are many new insects that are considered invasive coming into this area, and our seminars try to deal with those issues. Do YOU know how to deal with Clothes Moths or Stink Bugs? We know you need the hours, but more importantly, you need to be educated.

Last seminar, we reached out to close to 120 pest management professionals. Dave Johnson, Brian Sundnas, and Tom Dobrinska were simply outstanding. Despite my 45+ years in the industry, I still learned something - which is what it's all about.

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Summer  
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# The WILD Life

BY JANE PEIFER, *Ampest Exterminating & Wildlife Control*



## 'TURTLES'

Depending on your generation there are all kinds of famous turtles. Cecil, the Looney Tunes character, starred in a couple of cameo appearances where he outwits Bugs Bunny and wins a running race.



Or Crush and Squirt from Finding Nemo....

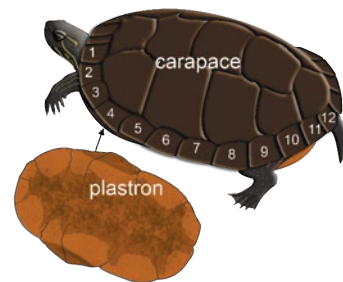


Or the Teenage Mutant Ninja Turtles.....

Regardless of which was your favorite loveable turtle character, actual turtles are pretty loveable as well. There are 260 species of turtles occur worldwide. Seventeen of these species inhabit Illinois, dwelling in forests, prairies, marshes, swamps, ponds, lakes, streams and rivers. Those aquatic species that bask are regularly seen on sunny days lining logs and sand banks. Other species are most often encountered in the spring while crossing highways and fields in search of new habitats, mates or nesting sites. The chief conservation issue for turtles is the loss or alteration of critical habitats. Over-exploitation of turtles for food and the pet trade are also serious problems in Illinois.

Turtles are members of the Phylum Chordata, Class Reptilia and Order Testudines. Their unique shell, lack of teeth and bony jaws, which are covered with a hard, keratinized beak somewhat like that of birds, make them unusual. A turtle shell has as many as 60 bones. It has two sections: a carapace, covering the animal's back, and a plastron, covering its belly. The

carapace and plastron are connected on the turtle's right and left sides by a bony bridge, which is formed by extensions of the plastron. The shell is fashioned from bones originating in the skin, which fuse with one another as well as with the ribs, vertebrae and parts of the shoulder girdle. In most species, large scales, called scutes, overlay the bones. However, in softshell turtles, a tough, leathery skin replaces the scutes.



Turtles' courtship and mating commonly occur in the spring and fall. All turtles must nest on land. Egg-laying typically occurs between mid-May and early July. A nest is usually a flask-shaped hole scooped out with the female's back feet. After egg-laying, the female again uses her back feet to pull dirt into



the hole and pack it down. When the nest is covered, she abandons it, never returning to see her young. The yellow mud turtle female is an exception. She digs a nest burrow with her front legs and then remains with the eggs in the burrow for several days to two weeks. Nevertheless, she is long gone by the time the eggs hatch.

Most Illinois turtles are opportunistic omnivores (eats food of both plant and animal origin). Even a snapping turtle's diet may include large amounts of plants along with the animal food it usually eats. Few turtles have the speed or agility to catch fast-moving prey. Most search for food slowly along the bottom



or over weed beds, grazing on vegetation and eating slow-moving animals. The occasional dead fish or fruit fallen from a riverside tree may attract large numbers of turtles.





## SOME INTERESTING TURTLE FACTS



- In the wild, aquatic turtles are known to survive from 40 to 70 years while certain terrestrial species (including the eastern box turtle) may live 100 years or more.
- The largest Illinois turtle is the alligator snapping turtle. In some locations it may grow to a shell length of 30 inches (77 cm) and a weight of more than 250 pounds (112.5 kilograms). The largest Illinois specimen on record weighed about 160 pounds.
- The smallest Illinois turtle is the spotted turtle. Its greatest recorded shell length in Illinois is 4.7 inches (12 cm).
- Many species of turtles have temperature-dependent sex determination (TSD). The sex of the embryo depends on the temperature within the nest at a critical period. For these species, hatchlings may be all male or all female.
- In Illinois, turtle eggs typically require about two months to hatch. Hatchlings of some species, like painted turtles, overwinter in the nest and do not move to water until the next spring.
- Turtles usually have a prominent tail that vary in size with sex (tails of males are longer and heavier than those of females). Snapping turtles have the longest tails of Illinois species.
- Most aquatic turtles hibernate underwater, often burying in the bottom muck. All but the softshells have thin-walled sacks attached to the cloaca that absorb oxygen from the water during winter.
- Yellow mud turtles typically inhabit temporary prairie ponds for two or three months in the spring, then hibernate on land throughout the rest of the year.
- Information provided by the Illinois Department of Natural Resources.

## PRESIDENT'S MESSAGE

### CONTINUED

I personally want to thank those individuals for their excellent presentations. We are SO fortunate to have such gifted friends. Don't forget about our June 24th Seminar which is particularly exciting because we are again featuring GREAT speakers. Tom Mueller, and Mike Weissman are two of the speakers on the agenda which promises to be an outstanding morning of information. So thank you for being a member of GCPMA and we will continue to work for you. It's all volunteer, and if you are interested, you can contact any of the board members or GCPMA.com. It is a rewarding experience.

**GARY PIETRUCHA**, *GCPMA President & Envirosafe Pest Management President*

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# INVASIVE MOSQUITO SPECIES: WHAT ARE THEY AND WHAT IS THE THREAT?

BY STANTON E. COPE, PH.D, VP, Technical Products and Services, Catchmaster  
Past President, American Mosquito Control Association (2015-16)

The term 'invasive species' is used often in the pest control industry. But what does it really mean, and why should we be so concerned? This article will examine the concept of invasive species, with a specific focus on mosquitoes and some fairly recent introductions into the United States, and the threats they may pose.

An invasive species may be defined as a living organism, including but not limited to, plants, parasites, pathogens, fungi, and animals (including insects) that is nonnative to an ecosystem and begins to spread out or expand its range from the original site of introduction. Even an organism's seeds or eggs may be invasive. Additionally, the species must have the potential to cause harm to the environment, the economy, or human health, which brings the pest control industry into the arena.

Invasive species are often spread by humans and the goods they use as they travel about the world. Most invasive species, such as the West Nile virus, Zika virus, zebra mussels, kudzu vine, and starlings are considered accidental introductions. Some invasive species, however, are originally brought to a new area or region for a specific purpose. A good example is the Asian carp, which was imported into the United States for use in aquaculture ponds. Unfortunately, through flooding and accidental releases, these destructive fish have ended up in the Mississippi River system (and hence access to many of the country's rivers and streams), resulting in all types of problems.

Some invasive species are the result of pets that escaped or were released into the wild. Consider the example of the Burmese pythons that are now plentiful in the Florida Everglades where they have no natural predators. These huge snakes, which may grow up to 20 feet long (!), are feeding on many local species in the Everglades, especially the wading birds.

When a new and aggressive species arrives in an area, there may be no natural predators, diseases, or other controls to check its population growth. The

result is often a dramatic, negative impact on the local wildlife. The Brown tree snake (BTS) was accidentally introduced to Guam, an island in the South Pacific, in the late 1940s or 1950s. With no predators and lots of food (wildlife) present, the snake quickly multiplied with estimates as high as 10,000 snakes per square mile at one time! Over the years, the BTS has been responsible for the extinction of some of the island's forest-dwelling birds, has repeatedly knocked out power to parts of the island, and has even gnawed on the fingers and toes of sleeping children.

According to the United States Geological Survey, there are about 6,500 non-native invasive species in the United States. Collectively, they cause more than 100 billion (that's 100 with 9 more zeros!) dollars' worth of damage every year to the U.S. economy. Examples of these costly effects include crop damage; threats to fisheries; clogging of water facilities and waterways (which can result in heavy mosquito production); increased risk of fires; negative impacts on ranchers and farmers; pathogen transmission and resulting disease to animals and humans; and in the case of mosquitoes, just plain old annoyance.

## EXAMPLES OF INVASIVE MOSQUITO SPECIES

### 1. *Aedes albopictus* (Asian tiger mosquito - ATM)

The Asian tiger mosquito (Figure 1) is black and white, with a distinct white line on the thorax (the body segment behind the head to which the wings and legs are attached). This species is native to tropical and subtropical areas but in the past few decades has spread to many countries. In the United States, it was first discovered in Texas in the mid-1980s and has since spread to approximately 1,350 counties in all or parts of 40 states. It is widespread in Illinois.

The eggs of the ATM are highly resistant to drought and are regularly moved around the world in things such as used tires and lucky bamboo plants. One of those methods is undoubtedly how they came to the United States. ATMs are aggressive biters,



primarily during the daytime, and they utilize a wide host range, including humans, to acquire their blood meals for egg production. This species has been found naturally infected with several viruses and is a potential vector for several human pathogens that cause diseases such as dengue fever, Zika, yellow fever, chikungunya, and others.

It prefers to breed in artificial containers, e.g., used tires, bird baths, buckets, clogged gutters, and even bottle caps as well as natural containers such as treeholes. Children seem to be particularly sensitive to bites of this species and can develop secondary infections from repeated scratching. In the author's opinion, this mosquito is the leading reason why backyard mosquito control services have dramatically increased, along with revenues, in the past decade or so.

## 2. *Aedes japonicus* (Asian bush mosquito - ABM)

As its common name implies, this mosquito species is native to East Asia. In the United States, it was first discovered in Connecticut, New York, and New Jersey in 1998. It has since spread to most of the Eastern U.S. as well as the Midwest, all the way to the Canadian border. It has also been found in the Pacific Northwest as well as Hawaii. This species has been found in Illinois but its current distribution is unclear. The ABM has a distinctive, lyre-shaped pattern on its thorax that appears golden.

This species is highly tolerant of cooler weather, being able to overwinter in the egg stage in sub-zero weather. This fact helps explain its northerly expansion in the U.S. It is well-adapted to living around humans and will feed on them as well as other mammals and birds.

In the laboratory, it has been shown that the ABM can be infected with several viruses. Also, in the U.S., wild-caught specimens were found to be infected with West Nile virus as well as La Crosse virus. Much like the Asian tiger mosquito, this species breeds in natural containers (e.g., rock pools) as well as artificial containers. More field and laboratory work is required in order to elucidate the specific role that this species may play in the transmission cycles of these two human pathogens, as well as others in the U.S.

## REASONS FOR CONCERN

From a public health and quality of life perspective, there are several reasons to be concerned regarding these invasive mosquito species, as well as others that will eventually make their way to the United States and establish here.

- **Annoyance.** As we have seen, these invasive species acquire their blood meals from a wide range of hosts, including humans. The Asian tiger mosquito is a very aggressive daytime feeder and can quickly ruin any type of social event or family activity in the backyard. And as previously mentioned, the bites, especially on children, can become infected due to repeated scratching.
- **Introduction Of New Pathogens.** Although not highly likely, there is the possibility that a mosquito carrying a virus or other pathogen from its native habitat could make its way to the U.S. via airplane, ship, or other mode of transportation. This scenario has played out several times with what is known as 'airport malaria', where an infected mosquito hitches a ride on an airplane and just like the passengers, disembarks at the destination, bites a local person, and an outbreak of malaria ensues.
- **Endemic Disease Cycles.** As invasive mosquito species establish in a new area and their population numbers increase, it is possible, and in some cases probable, that they will become involved in the endemic (regularly found) disease cycles. This is especially true of species that feed on humans as well as other hosts, as they may become 'bridge vectors'; that is, spreading pathogens from animals to humans. This could result in the geographic spread of a disease, localized outbreaks where the disease has not occurred before, or perhaps even in an epidemic.
- **Geographic Expansion.** Many of these invasive species are easily transported during human activity. Most of the time, this probably occurs via the eggs which as we have noted, are highly resistant to drought and can survive in things such as used tires for months or perhaps even years. Accordingly, we will undoubtedly see these invasive species continue to expand their range.

*Author's Note - Some of the material for this article was taken from websites of the United States Geological Survey, National Geographic, and the National Wildlife Federation. Please consult these references regularly for updates.*



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A LEGACY OF CONTROL.



# A PMP'S GUIDE TO KNOCKING OUT GERMAN COCKROACH POPULATIONS

CONTRIBUTED BY ZOËCON



German cockroaches are a widely troublesome species known for occupying buildings, restaurants, food processing facilities, hotels, and institutional establishments such as nursing homes. From properly identifying this type of cockroach to learning where it is most commonly found, this information can go a long way in helping you determine the right cockroach control protocol for each of your customers. That's why the Zoëcon team compiled the following control tips, so you can knockout roach populations and prevent callbacks.

## 1 PERFORM A PROPER INSPECTION

Along with inspecting the typical outdoor cockroach hotspots, like around landscape debris, manhole covers, and electrical boxes, treating indoor hotspots is just as important. Like many other insects, cockroaches are attracted to trash and waste receptacles. Cockroaches are known to find a hiding spot like a cardboard box next to a trash can for harborage—going out to get their food and then returning to their refuge. Other harborage spots to keep in mind the next time you're treating for cockroaches are boxes in pantries, grocery bags kept for reuse, stove hoods, and unused fireplaces.

## 2 UNDERSTAND THE PEST

It can be difficult to provide a comprehensive control solution if you are unfamiliar with the enemy's biology and behavior. German cockroaches are nocturnal—they hide during the day and come out at night to look for food. If you see cockroaches during the day, the population is likely large. They tend to congregate near sources of heat and moisture, which accelerate their growth and reproductive rates.

## 3 USE THE RIGHT TOOLS

Due to the long lifecycle of cockroaches and their adaptability to various environments, using the right product is key to getting the job done right, the first time. Lava-Lor® Granular Bait provides PMPs with effective and quick knockdown of cockroaches. For residential accounts, this bait should be placed around the home in a bait station. Lava-Lor® Granular Bait is also approved for use in food handling areas, which means any cockroach harborages don't stand a chance.

In addition to applying the right product, be sure to break out all the tools in the toolbox. Vacuuming is an often-overlooked tool, which significantly reduces the number of adult and dead roaches, egg cases and feces.



## 4 STORE YOUR BAITS PROPERLY

Treat your baits like your food. Keep products tightly sealed and away from other chemicals. If conditions are warm, Lava-Lor® Granular Bait should be kept in an insulated cooler to ensure that the bait stays fresh and effective.

## 5 EDUCATE YOUR CLIENTS

It's hard to tell clients that their ill-kept home is a reason for the cockroach problem. You can, however, explain the important role they play as your partner in practicing proper sanitation to prevent roach infestations. Thoroughly sealing and storing food as well as routinely cleaning up after leaky faucets or appliances where water tends to pool up is an easy but crucial step your clients can take to keep roaches out.

### The Best Tools for Cockroach Treatments

Lava-Lor® Granular Bait provides pest management professionals with the ultimate solution for dealing with tough cockroach infestations. This ready-to-use and easy-to-apply product is approved for a variety of sites to ensure that pests are knocked down. Lava-Lor® Granular Bait features two active ingredients providing effective knockdown throughout multiple modes of action.



# IS BIO-SANITATION THE MISSING LINK TO YOUR SUCCESS?

BY HOLLIE RANDOLPH, *Nisus Corp*

## Developing a bio-sanitation program can expand your service menu and build your business. So what is it, anyway?

Bio-sanitation is the process of using beneficial probiotic microbial spores to clean, reduce buildup and break down FOG (fats, oils, grease), carbohydrates and proteins. Once the microbes come in contact with favorable conditions (a moist environment with organic debris), they quickly germinate and produce active colonies. These activated probiotic microbes continuously produce enzymes to digest and consume the organic debris, eliminating the source of the problem and preventing odors.

## How it can help

Bio-sanitation is not a replacement for cleaning. It is a beneficial tool, but not a miracle solution. A bio-sanitation product can help loosen years of accumulated organic matter prior to a deep clean. Regular cleaning, maintenance and repairs still need to be performed.

Bio-sanitation handles the buildup of FOG by breaking down unwanted organic matter. It also eliminates biofilm, a primary contributor to the spread of disease and a source of fly development. Biofilm is a thick, slimy substance formed by harmful bacteria cells as a protection and defense mechanism. By removing organic debris, bio-sanitation helps control odor at the source. Remember, organic debris isn't necessarily "food" debris; it can come from any source. And certainly, residential customers often have a need for bio-sanitation with slow-running drains, biofilm buildup in floor drains, smelly washing machines or dishwashers, septic tank issues and so on. Bio-sanitation applications to cracks and crevices, drains, around equipment legs, under cabinets, etc. will help remove the built-up organic debris that contributes to pest harborage.

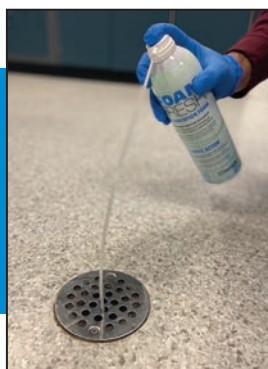
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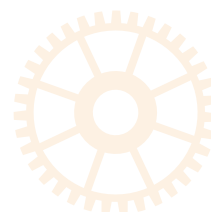
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responsible. A bio-sanitation product continues to work as long as conditions remain favorable for the microbes. If conditions turn unfavorable, the microbe colonies revert into dormant spores but will germinate and produce new active cells to start the process again if conducive conditions return. A bio-sanitation product does not have to be applied as often as chemical products, so by having to apply less often you save money.

Expand your business opportunities with bio-sanitation. Bio-sanitation is an excellent add-on to your pest control business, especially if you already have a commercial kitchen or food service contract. Work with your customers to make sure they are keeping up their end for regular cleaning and sanitation. Adding bio-sanitation can make a key and appreciated difference in both residential and commercial accounts.

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# HOW TO CHOOSE THE MOST EFFECTIVE FORMULATIONS FOR PERIMETER PEST CONTROL

BY ERIC PAYSEN, PH.D, *Technical Services Manager, Syngenta Professional Pest Management*

The primary goal for perimeter pest control is protecting a structure's interior with preventive products and best practices. Recognizing common pests and understanding biological processes are essential when developing treatment strategies. As part of that, using various insecticide formulations should be included in a strong treatment strategy.

Insecticide formulations include at least one active ingredient combined with various inert components that allow for product dispersal. During development, chemists consider safety, storage, handling, application and the effectiveness of various combinations. Formulations are typically grouped into the following categories based on composition:

**BAITS:** Although often overlooked in perimeter pest management, baits can be incredibly effective. Ants are target pests for bait treatments outdoors, but baits also control chewing insects like peridomestic cockroaches, crickets and earwigs. Comprised of food materials and slower-acting active ingredients, outdoor baits fall into two categories:

**Gel baits:** These baits are consumed by sweet-loving ants, including many super-colony ants. In ant colonies, gel baits are effective when applied directly to active foraging trails but should not be applied if no foragers are present during the inspection. For super-colony ants, gel baits should be used in combination with liquid residual treatments.

**Solid granular baits:** These baits are effective at managing various ant species and is also an option for other chewing insects, like cockroaches, crickets and earwigs. Solid granular baits are an excellent addition to preventive perimeter treatments and are most effective in the spring when insect activity begins.

**LIQUID RESIDUALS:** These are the most commonly applied products in perimeter pest management. Including microencapsulations (CS), wettable powders (WP), water-dispersible granules (WDG) and suspension concentrates (SC), all liquid residual formulations require adding water to the bottled

concentrate before application. Liquid residuals can be divided into two categories:

**Fast-acting:** These formulations typically contain active ingredients in the pyrethroid class of insecticides. They are useful in creating barriers that control pests that breach the treatment zone. Barriers created by microencapsulations are especially effective because the capsule protects the active ingredient from UV rays and other damaging environmental factors.

**Slower-acting:** In this case, slower is better, in that the extended time required for mortality gives pests time to transfer the active ingredient to their nestmates. This effect, called horizontal transfer, is most common in ant management. These formulations have revolutionized ant management and are used by creating perimeter treatment zones, following leading edges where ants trail and by directly treating active foraging trails. Often containing the same active ingredient as baits, they are compatible options for combination treatments with bait usage.

**GRANULAR INSECTICIDES:** Not to be confused with granular bait formulations, granular insecticides are not eaten, instead providing long-lasting residual control and relatively quick contact mortality. Ideal treatment sites include heavily vegetated planter beds and areas with dense river rock landscaping. Like high-volume liquid applications, but without the need for a large spray rig, these formulations can settle down through complex substrates to the soil level where pests breed and harbor. A granular insecticide application is a time-effective tool that can help eliminate pests from tough-to-treat habitats.

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**Luke Rambo**, owner, and **Chris Somers**, service manager of Rambo Total Pest Control

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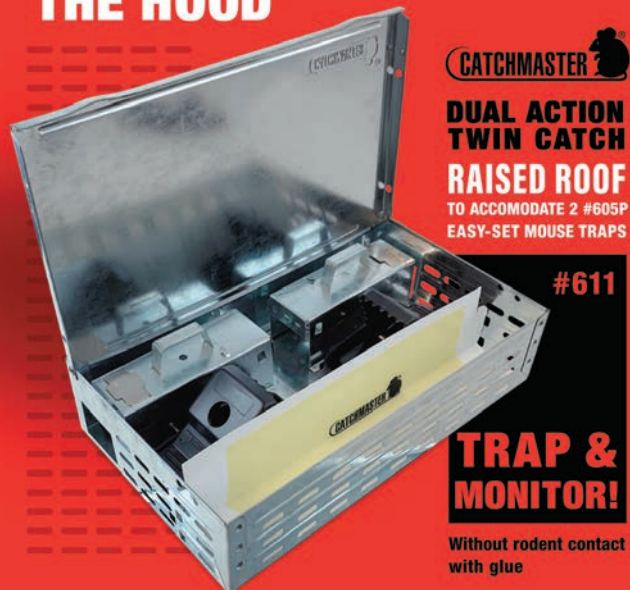
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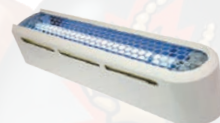
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# TRAPPING AT ACCOUNTS

BY SARA KNILANS, *Bell Labs*

When trapping at accounts, you must first figure out where rodents are traveling. Sebum (rub marks), urine, feces, and gnaw marks are all great indicators of rodent run-lines/activity, and ultimately where you should be placing your traps. During your inspection, identify areas that rodents would find appealing, as these areas will lead you to find rodent activity that may have otherwise been missed. Rodents are more likely to travel along shadow lines, underneath pallets, or along baffles/pipes near the ceiling of the facility, or in other inconspicuous places. Rodent run lines are not always in locations that are conventional or easily accessible—this can make trap placement difficult.

Traps should be secured within a bait station, or to a surface using zip ties. This promotes clean kills of rodents and prevents non-targets from dragging the trap or getting caught in a trap that is not meant for them. Consider utilizing trapping stations, such as Bell's PROTECTA EVO TUNNEL, which can be used

indoors or outdoors and can be secured to fences or pipes via cable ties in both the vertical and horizontal position. With a low and discreet profile, the EVO TUNNEL provides tamper-resistant coverage of a variety of rat and mouse traps.

After securing traps along rodent run lines, the last crucial step is pre-baiting. To allow neophobic rats to get accustomed to the traps, place them backwards, and bait the back of the trap without setting for 3-7 days—we call this pre-baiting. Once rats get used to the traps, set them in the open position, ready to fire. Effective tools for pre-baiting include, but are not limited to: Detex®, Provoke® rat attractant, and cotton balls.

Inspection, secure & strategic trap placement, and pre-baiting are essential to implementing a successful trapping program at accounts.

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# BEADED LACEWINGS CAN TAKE DOWN SIX TERMITES WITH A SINGLE FART

In the New York Times Bestseller, *“Does It Fart? The Definitive Field Guide to Animal Flatulence,”* authors Dr Nick Caruso and Dr Dani Rabaiotti reveal the parping potential of everything from herrings (big yes) to dinosaurs (also yes). One of the most formidable species in the book, described as having “one of the few genuinely fatal farts known to science” is the beaded lacewing, *Lomamyia latipennis*. To the

untrained eye, these insects look like an innocent, frosted moth, but this particular species of lacewing is harboring an odorous secret.

*L. latipennis* is a dedicated follower of termites, found on all

the same continents as these eusocial insects (which is every continent except Antarctica, by the way). An adult beaded lacewing will conveniently lay her eggs within wriggling distance of a termite’s nest, which the larval form of *L. latipennis* will sneak into after hatching. You might think a legless larva wouldn’t stand much of a chance against an army of termites, but *L. latipennis* have evolved to practice a unique and highly effective means of attack.

When a larva comes across some termites, it raises its rear-end to the termite’s head-height and releases a

vapor-phase toxicant called an allomone which knocks them out, and the larva feasts on their frozen bodies. In essence, it farts them to death. Depending on how many unfortunate termites are downwind when the toxic toot fires off, a study found that the larva can actually take down multiple termites with a single poof. A deadly yield that’s particularly impressive when you realize the average *L. latipennis* is about 1/35th the weight of the termites. That’s some serious #gainz for one guff.

The study found the potent excretion is remarkably specific, too, and had no effect on other insects found in the corridors of a termite’s nest including flies, wasps, and booklice. As if it weren’t all grim enough, the termites don’t actually die from the initial exposure but are paralyzed, which means they’re still alive when the larva starts feeding. Even those who don’t get eaten are likely to eventually die from the exposure. So, there you go. That’s something you know now.

While the original study, published in *Nature* back in 1981, yielded some magnificent results, the exact contents of the lacewing fart that proved so fatal were not identified and, according to a report from *Wired*, no one has been able to repeat the original experiments so, for now, it remains a mystery.

**SOURCE:** <https://www.iflscience.com/plants-and-animals/beaded-lacewings-can-take-down-six-termites-with-a-single-fart/>

# RUSSIA REPORTS FIRST CASE OF H5N8 BIRD FLU IN HUMANS

Russia has reported the first case of a bird-flu strain, H5N8, being passed from birds to humans.

Officials said seven workers at a poultry farm in southern Russia had been infected following an outbreak in December. They are believed to have caught the virus from poultry on the farm.

Anna Popova, the head of Russia’s health watchdog Rospotrebnadzor, said on February 20 that authorities had alerted the World Health Organization (WHO).

Popova said all seven people infected by H5N8 were “**now feeling better.**” She added that there was no sign of transmission between humans.

The WHO confirmed that it had been notified by Russia about the infections.

**“We are in discussion with national authorities to gather more information and assess the public health impact of this event,”** a spokesperson said. **“If confirmed, this would be the first time H5N8 infects people.”**

**SOURCE:** <https://americanmilitarynews.com/2021/02/russia-reports-first-case-of-h5n8-bird-flu-in-humans/>





# NAVY GRAPPLING WITH BEDBUG INFESTATION OF NUCLEAR SUBMARINE USS CONNECTICUT

Clothes got laundered, mattresses replaced and pesticides sprayed as the Navy waged war against a stubborn infestation of bedbugs that found their way onto a nuclear-powered submarine at its home port in the Bremerton area.

Navy entomologists now certify that **“all feasible measures have been taken”** to control the infestation and have recommended **“repopulation of berthing,”** according to a statement from Cmdr. Cindy Fields, a public affairs officer for the Naval Submarine Forces Pacific.

This campaign aboard the USS Connecticut has included laying down diatomaceous dust to draw insects out of hiding and into contact with this “deadly” countermeasure, according to the statement.

But the Navy’s efforts have not quelled concerns from crew members, some of whom have been sleeping on cots in a pier-side shelter erected as temporary quarters to avoid getting bitten in the submarine “racks” where people sleep.

*“They are really frustrated and feel like they have been let down by the Navy,”* said Jeffery Rachall, who previously served aboard the submarine and — since leaving military service in 2018 — has remained in close contact with other crew. *“They are complaining about a lack of sleep. They itch, and the bugs are crawling all over.”*

**Bedbugs are oval-shaped insects, about one-quarter inch long when fully grown, that feed on blood from humans and some animals. They can be transported into hotels, homes and boats on people’s clothing, luggage or other personal belongings. They often take up residence in beds, where they may leave small spots that mark their presence. Though bites swell and become itchy, it may take two days or more for them to show up.**

It is unclear how the infestation started on the USS Connecticut, but it’s possible it was during a port stop, according to Rachall.

The USS Connecticut is a nuclear-powered, fast-attack submarine launched in 1997 that was transferred to a Washington home port in 2011. It can be used to conduct reconnaissance and protect Navy fleets.



*USS Connecticut, a nuclear-powered, fast-attack submarine launched in 1997, is battling a bedbug infestation. (US Navy/TNS)*

The infestation on the USS Connecticut was spotlighted in a recent article in the Navy Times. It included an interview with an unnamed petty officer who said that the bedbug infestation first became an issue during a deployment in the Arctic Ocean in March 2020, and that the fatigue from bedbugs’ presence has become a safety issue.

*“If someone’s sleep-deprived because they’re in the rack getting eaten alive by bedbugs, he could fall asleep (at the controls) and runs us into an underwater mountain,”* the petty officer told the Navy Times.

The Navy Times also reported that some petty officers allege that the command is forcing sailors to return to sleeping in the racks this week during training, when the entire sub crew will be on board.

The Navy public affairs officer said that the first reports of bedbugs were not made until December of last year. Initial inspections that month did not detect them. Then, around Feb. 19, the “physical presence of bed bugs” was established, a requirement for the treatment. Daily inspections have occurred since then, with the two Navy entomologists arriving March 4 “to direct hands on efforts,” said the statement from Fields.

**“The Navy takes the safety and health of Sailors very seriously,”** Fields wrote.

**SOURCE:** <https://americanmilitarynews.com/2021/03/navy-grappling-with-bedbug-infestation-of-nuclear-submarine-uss-connecticut/>

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# AMENDMENT TO HOUSE BILL 3118



## (415 ILCS 60/4 change)

**49.** “Barrier treatment” means the application of an insecticide by spray, aerosol, mist, liquid, dust, or powder that is intended to leave a residual coating on plant foliage, vegetation, or other natural or manmade surfaces for the purposes of killing adult mosquitoes and for the control of any life stage of tick.

## (415 ILCS 60/13.4 new)

**Sec. 13.4.** Barrier pesticide; mosquito control; pollinator protection.

(a) Notwithstanding any other provision of law, a barrier pesticide may be applied only using the evidence-based model under subsection (b) and may not be applied using a subscription-based model of treatment.

(b) A barrier pesticide may be applied only by a commercial applicator for commercial or residential purposes if the following evidence-based model of application is used:

(1) Documentation of species and species abundance the barrier pesticide is targeted toward as part of record requirements in this Section.

(2) A domestic inspection of the property for mosquito sources is conducted before application of the barrier pesticide.

(3) The commercial applicator of the barrier pesticide has undergone the course and licensure requirements under subsection (c).

(4) Chemical spraying of a barrier pesticide may not be applied outdoors where wind speed is 10 miles per hour or greater.

(5) At least 24 hours before the treatment is scheduled to occur, the commercial applicator must notify neighbors of the property to which the impending barrier pesticide treatment is to be applied.

(6) For at least 24 hours after the treatment has been applied, the property to which the barrier pesticide is applied must display

yard signage indicating that the yard has been treated with barrier pesticides.

(7) A commercial applicator must have available, at all times while a treatment is being conducted, copies of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) product label describing the specific health and environmental risks from pesticides for distribution if requested.

(8) The owner of the property to which the barrier pesticide is applied must be given a copy of the FIFRA product label describing the specific health and environmental risks from pesticides by the applicator.

(c) The Department of Agriculture shall adopt rules creating a process for the licensure of commercial applicators for residential treatment using barrier pesticides. The licensure process shall include:

(1) a course and material specific to mosquito control and pollinator protection in a residential environment;

(2) requirements for domestic inspections;

(3) the collection of surveillance evidence of mosquitoes;

(4) identification of mosquitoes;

(5) mosquito life stages;

(6) pesticide-free source reduction methods;

(7) bystander protection;

(8) product label requirements; and

(9) any other topics the Department of Agriculture determines relevant.

(d) The Department of Agriculture shall establish evidentiary thresholds for commercial barrier treatment in partnership with the Department of Public Health and the University of Illinois. The evidentiary threshold shall include:

(1) Documentation of species abundance the barrier pesticide is targeted toward.

(2) A domestic inspection of the property for mosquito presence at established threshold is conducted before application of the barrier pesticide.

(3) A requirement that the commercial applicator of the barrier pesticide has undergone the course and licensure requirements under subsection (c).

(4) Further requirements for domestic inspections to provide evidence of mosquitoes and reduce unnecessary spraying as determined by the Department of Agriculture.

(e) All public health mosquito control treatments conducted by mosquito abatement districts, public health departments, townships, municipalities, or other units of government or by contract or agreement by commercial entities on behalf of mosquito abatement districts, public health departments, townships, municipalities, or other units of government are exempt from this requirement.

(f) The Department of Agriculture shall provide additional training for licensed commercial applicators, including pollinator education. The Department of Agriculture shall review and update their testing and training procedures periodically.

(g) The Department of Agriculture may partner with the University of Illinois to develop and administer a voluntary continuing education curriculum to include in-depth pollinator and ecological protection.

## (415 ILCS 60/13.5 new)

**Sec. 13.5.** Mosquito misters prohibited. No person shall install or use any residential automatic pesticide misting system in this State. For purposes of this Section, “residential automatic pesticide misting system” means any device that is designed to be installed on, near, or around the exterior of any residential dwelling or the grounds of such a residential dwelling and to automatically spray any pesticide solution at timed intervals.



# ENHANCE YOUR RESIDUAL PRODUCTS

BY CHIP HOUMES, *Precision Labs*

Another busy pest season is here. I would like to make you aware of a couple of products that you can use to make your exterior treatments more effective.

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