

# The Pennsylvania Vector

Spreading News to the Vector Control Community

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### Special points of interest:

- **Pennsylvania again leads the nation in Lyme disease cases on page 9**
- **Calendar of upcoming events on page 12**
- **Remember to like us on Facebook**



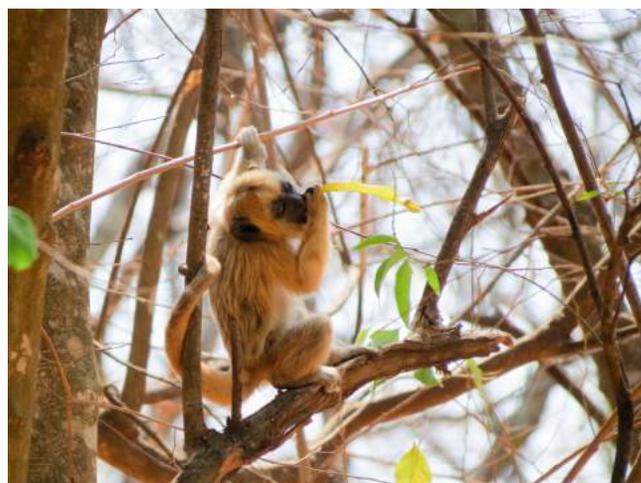
## Brazil's Expanding Yellow Fever Outbreak Started With Monkeys

The first sign of trouble was the monkeys dropping dead in the forest. Then people started getting sick and dying, too. Brazil is in the midst of its worst yellow fever outbreak since the 1940s, when the country started mass vaccination and mosquito eradication campaigns to thwart the virus.

The first cases in this current outbreak were detected in December among men living in rural parts of the Brazilian state of Minas Gerais, an agricultural region just north of Sao Paulo and Rio de Janeiro. As of the first week of February, the Brazilian Ministry of Health has reported more than 1,000 suspected human cases of yellow fever and hundreds more probable cases in monkeys since December. Usually there are only a handful or at most a few dozen cases of yellow fever a year in Brazil, and they're found deeper in the Amazon, not hundreds of miles to the south in Minas Gerais.

Most of these cases are sylvatic or "jungle" cases in which a person who's working in or visiting a forest is bitten by an infected mosquito, says Anna Durbin, a professor of international health at the Bloomberg School of Public Health at Johns Hopkins. Human outbreaks tend to follow larger outbreaks among primates in the jungle. "One of the proverbs is that 'when the howler monkey falls silent, everyone starts to worry,' because they know yellow fever is in the area," Durbin says. In this outbreak more than a thousand monkeys have been found dead. Health officials are analyzing the corpses to confirm whether the animals actually died from yellow fever.

Durbin says this is a significant outbreak. "What we are starting to see now is a larger number of cases," she says. "And the concern is it could spread to a city and you'd have urban yellow fever, which they haven't really had in South America in something like 50 years." In an urban outbreak, *Aedes aegypti* mosquitoes spread it from person to person. A different strain of mosquitoes circulates the virus in jungle outbreaks.



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## Spider-Like ‘Bug’ Roils Texas Ranch

Submitted by: Joseph Fitzpatrick

Landowner says its endangered status limits his property use and wants it delisted.

A tiny spider-like creature that lives in caves on his property is causing a giant headache for Texas rancher John Yearwood.

The bone cave harvestman, a blind arachnid found in Central Texas, has been on the U.S. endangered species list since 1988. But Mr. Yearwood wants the harvestman—which resembles a spider but technically is more of a cousin sometimes called a daddy longlegs—removed from protected status. He said its discovery on his land hinders the use of at least 35 acres north of Austin that has been in his family since 1871.

“It’s the government telling me that I, at my own expense, have to have a preserve for everyone in America,” Mr. Yearwood said. “I pay taxes on the land every year. And there’s no way I can sell it—nobody will buy it.

”Federal law prohibits modifications or degradation of habitats of endangered species that could impact their breeding, feeding or sheltering, except under federal permit. Those permits are mostly available for conservation and scientific purposes. Harming or harassing the species, physically or through noise or light is also prohibited.

Mr. Yearwood said he hasn’t been given a list of activities not to do, but is reluctant to do anything with the land in Williamson County. He and other property owners have filed a lawsuit against the U.S. Fish and Wildlife Service, which oversees endangered species rules, to delist the harvestman, saying it isn’t endangered and is unnecessarily restricting

use of their property. Mr. Yearwood’s suit also contends that the federal government is exceeding its authority by regulating noneconomic activity.

Last month, the state of Texas threw support behind Mr. Yearwood in a friend-of-court brief filed in U.S. District Court in the Western District of Texas, calling the situation a “clear overreach in the use of federal power.

The rancher’s dilemma is a peculiar example of broader tensions in the West over federal oversight of land. In this case, the conflict confronts federal rules for privately owned land. But the same frustration fueled the armed takeover of an Oregon wildlife refuge on public land that resulted in the death of a protester at the hands of law enforcement, and it continues to play out in numerous courtrooms and land spats across the region. The wildlife service didn’t respond to the allegations by Mr. Yearwood, but said last month that it is evaluating the status of the spider “to inform future conservation and recovery efforts.



Image Credit: SWCA  
Environmental Consultants

The Center for Biological Diversity, a national group focused on the protection of endangered species, has joined other conservation groups in a request to intervene in the court case to support keeping the harvestman as endangered. The conserva-

tion groups said the harvestman, which has a scientific name of *Texella reyesi*—is “incredibly rare” and threatened primarily by development and road construction. Mr. Yearwood, 71 years old, said three harvestman caves were found on his property about 12 years ago during a highway expansion project. The caves disappear underground from small openings on a mostly flat area of his property. He said that he’s never seen one of the “bugs,” which are pale orange and up to 0.11 inches long. He calls his 865-acres of farmland “Heartbreak Acres” because of the grief he said that he’s gotten from government officials over the years. He runs a commercial cattle operation and allows community groups to camp free on the property. But he said he keeps farming and camping activity away from the harvestman caves for fear of running afoul of federal rules.

There were 168 confirmed harvestman caves in 2009, according to the wildlife service. Williamson County has 11 harvestman habitat preserves, an area that can include many caves, on almost 900 acres, officials there recently said. The wildlife service denied a petition in June 2015 by Mr. Yearwood and others to delist the harvestman, saying substantial information wasn’t provided to warrant the change. In response, a coalition of property owners led by the American Stewards of Liberty, a Texas-based private-property rights group, filed lawsuit in December 2015. Mr. Yearwood and Williamson County received approval by the court to intervene as plaintiffs.

In November, the wildlife service acknowledged in court record that a disc of information submitted with the original petition was misplaced  
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Mosquito control programs nearly wiped out the *Aedes aegypti* in the Americas in the latter half of the 20th century, but that mosquito has since staged a comeback.

That's the same mosquito that fueled the yellow fever outbreak in Angola last year and allowed Zika to infect millions throughout the Americas in 2015 and 2016. (WHO announced this week that the Angolan outbreak is now officially over.)

Public health officials say there's the potential for yellow fever to spread like wildfire if it takes hold in a place that has *Aedes aegypti* mosquitoes and where vaccination rates are low. Unfortunately that's the case throughout much of the tropics of this hemisphere. "The nightmare scenario for me is San Juan, Puerto Rico," says Mariano Garcio-Blanco, an emerging infectious disease specialist and the chair of biochemistry and molecular biology at the University of Texas Medical Branch in Galveston. Given how deadly yellow fever can be, an outbreak in a crowded city like San Juan, Puerto Rico, or Sao Paulo, Brazil, could be a public health disaster.

"San Juan hasn't seen yellow fever in probably a century. *Aedes aegypti* is rampant," says Garcio-Blanco. "It [yellow fever] could spread. Yes, it could spread rapidly." San Juan also happens to be where he grew up.

The disease itself doesn't hit everyone hard. Most victims have only mild symptoms, like fever and chills, aches and nausea. Some have no symptoms at all. About 15 percent of patients develop a more severe form that can lead to high fever, bleeding, shock, organ failure and death. In the current outbreak the Brazilian Ministry of Health is pegging the fatality rate among confirmed cases at 36 percent. Among people who develop severe symptoms, there is no specific cure and as many as half the patients die. Yet a highly effective vaccine is available to prevent the disease. The vaccine is relatively expensive and can cause adverse side effects. Also there's been a global shortage of the vaccine recently as tens of millions of doses were shipped last year to Angola and the DRC (including from Brazil) to battle the outbreak in Africa. But even before that, yellow fever vaccination rates in the Americas have been fairly low.

"The great majority of the popula-

tion in all of South America and Central America and the Caribbean are unvaccinated [against yellow fever]," Garcio-Blanco says.

Officials in Brazil have launched mass vaccination campaigns in areas around where the cases have been detected. In addition, the governor in Minas Gerais has declared a public health emergency. The Brazilian government already has shipped 10 million doses of vaccine to five states in the south to try to stem the outbreak and has ordered additional stockpiles to be used in other hot spots as needed.

The World Health Organization is monitoring the Brazil outbreak and offers a rather pessimistic assessment of the region's preparedness. WHO's website states: "Latin America is now at greater risk of urban epidemics [of yellow fever] than at any time in the past 50 years."

Article Credit: Jason Beaubien, February 17, 2017.  
<http://www.npr.org/sections/goatsandsoda/2017/02/17/515444290/brazils-expanding-yellow-fever-outbreak-started-with-monkeys>

## Device Aims to Catch Dangerous Bugs While Letting Others Escape

Submitted by: Mary Vibostok

WASHINGTON – A smart trap for mosquitoes? A new high-tech version is promising to catch the bloodsuckers while letting friendlier insects escape – and even record the exact weather conditions when different species emerge to bite.

Whether it really could improve public health is still to be determined. But when the robotic traps were pilot-tested around Houston last summer, they accurately captured particular mosquito species – those capable of spreading the Zika virus and certain other diseases –

that health officials wanted to track, researchers reported Thursday.

The traps act like “a field biologist in real time that’s making choices about the insects it wants to capture,” said Microsoft lead researcher Ethan Jackson, who displayed a prototype trap at a meeting of the American Association for the Advancement of Science in Boston.

The traps are part of Microsoft’s broader Project Premonition, aimed at learning how to spot early signs of outbreaks.

“It catches people’s imagination,” said University of Florida medical entomology professor Jonathan Day, who isn’t involved with the project. “But whether it is actually a trap that will functionally improve surveillance, I think that remains to be seen.”

Trapping is a key part of mosquito surveillance and control, important so health officials know where to spray or take other measures to fight mosquito-borne diseases. Trapping hasn’t changed much in decades: Typically net traps are  
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# What's Happening in Region 1

Submitted by Ray Delaney



Staff from the Philadelphia Department of Public Health have spent some off-season time looking for overwintering mosquitoes. Pictured here are

Kaila Druetto, Rosalie Neris, Tom Ferretti and Emily Keough aspirating samples (see inset picture) off of the walls in the bunkers of Ft. Mifflin on the Delaware.

Philadelphia has also started its annual Rodent survey. Each year a section of the City is surveyed door-to-door with special attention being placed on vacant lots and properties that add to the City's rodent infestations.

Ray Delaney recently attended the Scientific Coalition on Pest Exclusion meetings held at Harvard University to discuss pest exclusion in a variety of settings such as family residences, day care centers, schools, etc. This small group's meetings, funded by the Northeast IPM Centers and headquartered at Cornell University Cooperative Extension, concluded with a tour of a 100 year



old dormitory now under renovation. As part of the construction process, all openings, including plumbing and electrical openings between floors and walls are being sealed to prevent the migration of pests such as rodents, roaches and bedbugs from entering the building or moving freely once inside.

Bucks County Health Department officials recently discovered two animals that tested positive for Rabies. One of which was a raccoon found near a Giant supermarket parking lot in Warminster, PA. All of the counties in the SE Region are invited to a Kick-off Meeting for the upcoming mosquito season on April 20th at the DEP SE Regional Office. Contact Chick Clark for details.

# What's Happening in Region 2

Submitted by Louise Bugbee



Winds of Change in the Northeast. Here in the Northeast it's been a fairly mild winter.

What will this mean for all of our favorite pests? There really hasn't been much snow. Woodland pools may not be a problem for early season mosquitoes. Maybe the lack of snow cover will help to limit the tick populations in some spots. It remains to be seen.

Winds of change are blowing through the Northeast region. The Annual Christmas party at the DEP Bethlehem office morphed into a retirement party for Len Forte who ended his illustrious mosquito hunting career in December. He was awarded the

Golden Dipper for his many years of service to the citizens in the Northeast. Len was a great mentor for many of us. He will be missed at the office and on the ground, since, at this time, there is no plan to refill that position.

In Lehigh County, the job posting is up for a new coordinator. I have decided to hang up my dipper after



17 years. I'm taking a dive into uncharted waters. Jeff Carroll, my longtime assistant here in Lehigh, is taking over the defunct Northampton County program. So it will be all new here.

I confess I am more than a little anxious about the transition here in Lehigh but I will hope for the best. There is a big personal investment in building a program from scratch, nevertheless at some point you have to hand over the reins. The data system is a wonderful asset but so much of what we do in and know about our counties is stored in our own heads. There is no way to effectively pass on years of field experience to a new person. So much of what we do is on the job training. I guess that's why we all love our jobs  
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(continued from page 4) so much. You get out of it what you put into it. I wish the next person a long and happy stretch in Lehigh County.

The newly renamed Mosquito-borne Disease Control Grants have been received. The kick-off meeting in the region is planned for April 3 with Lackawanna, Lehigh, Luzerne, Monroe and Northampton in attendance.

There has been a flurry of Anaplasmosis cases in horses in the southern area of the region. The infective agent is *Anaplasma phagocytophilum*, presumably the same strain that affects humans. Horse owners are rightfully concerned. It's safe to assume that most horses now get vaccinated for West Nile but the tick borne diseases are a threat that will require constant vigilance.

According to the CDC, Pennsylvania is number one again for Lyme with a total of 12,092 reported human cases in 2016. Horses have been falling victim to Lyme as well. The equestrian community may be a new audience for us to address about ticks and tick control. Recreational riding and stable facilities, 4-H horse clubs, and farmers who use or board horses could benefit from some tick education. Vector control isn't just for people. Some arthropods don't discriminate and the pathogens are happy to comply.

## What's Happening in Region 3

Submitted by : Katie Seymore



It is always fun to speculate what the future field season may have in store. The 2016 season was a remarkably mild year for

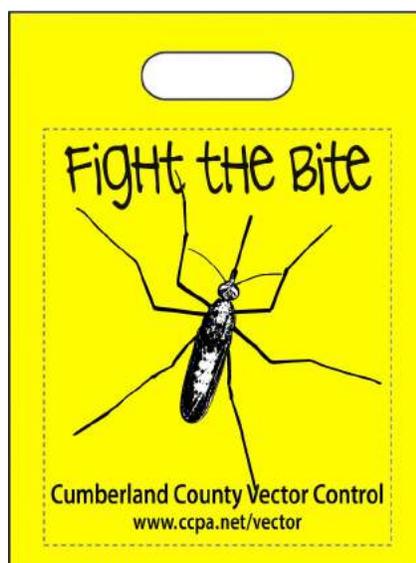
West Nile activity, although extra Zika surveillance kept many counties in the Region busy.

With such a warm winter, will the viral pendulum swing the other way this year? I am still just waiting for a good snow storm to fill up the vernal ponds in our area.

Over the winter, counties have worked on organizing clean up events to help eliminate *Aedes albopictus* breeding habitat. Jen Stough coordinated tire collections in Lancaster and Lebanon this November using Zika grant funds, collecting 346 tires from 16 municipalities in Lebanon and 543 tires from 22 municipalities in Lancaster. Cumberland is also working to organize a cleanup event in select urban areas. We are building goodie

bags stuffed with literature and Mosquito Dunks to distribute door to door in mosquito infested neighborhoods. York has already teamed up with the Rotary Club for a cleanup event in January and will also be assisting community groups in the Great America Cleanup of PA this spring.

In the education realm, York provided Pesticide Recertification Programs



Door hanger bag created by Cumberland County Vector Control.



in the region as part of Penn State Extension's Professional Pest Managers School, and educational displays were set up at the PA Garden Show of York and other local events. Tom Smith represented Pennsylvania in attending the MAMCA Conference in Newport News, Virginia, sharing and gaining knowledge with professionals up and down the eastern coast.

Finally, both Lebanon/Lancaster and Adams Counties are currently working to fill their WNV Technician Positions before the 2017 season. We look forward to welcoming the new technicians into the mosquito community.

## What's Happening in Region 4

Submitted by Christian Boyer



It is nearly March, but the weather seems like it's May. Mosquitoes are becoming active in their hibernacula and there has been

a report of an early mosquito bite in Region 4. The last time Pennsylvania experienced this type of early warmth was in 2012, and most of us remember those implications, which led to the highest amount of positive mosquito pools in the history of the program. However, we have also

learned that this virus is highly unpredictable, so we'll have to wait and see what this season brings.

There is big news coming out of Region 4 for the 2017 Mosquito Borne Disease season. There will be three counties receiving state grant funding, providing routine mosquito surveillance to seven counties. Those granted counties include Centre, and newly added Lycoming and Northumberland. Northumberland County will provide service to four surrounding counties, including Union, Snyder, Montour and Columbia. This is the first year since 2009 that any county level surveillance has been conducted

other than in Centre. Grants are approved and have been returned to the counties.

This is a good time to start preparing for the upcoming season. Maintenance of surveillance and control equipment can be conducted, ordering of supplies, and seasonal employment opportunities should be posted. The mosquitoes will be flying soon!

And finally, we wish Bert Lavan well in his retirement and thank him for his 12 years of dedication to the West Nile Virus Program, this organization, and the citizens of Centre County.

## What's Happening in Region 5

Submitted by Mary Vibostok



Many new and exciting things are happening in Region 5 in 2017. I am pleased to introduce myself as the new SW Regional VP. I started my career in mosquito control in

2003 as the West Nile virus coordinator in Cambria County. I was completely untrained and ignorant about mosquito biology and began my long journey to becoming an experienced and knowledgeable vector control professional. It has certainly been a rewarding one.

As I write, I contemplate how our local prognosticator, Phil, may have missed his mark this year. No early spring? I'm not so sure. It has been unseasonably warm and mild throughout the winter months. What does this mean for those of us in vector management? I guess time will tell. I do know Region 5 is well prepared for the upcoming mosquito season. The DEP is happy to be able to provide grants in 2017 to Greene, Westmoreland and Washington counties. We now have 7 of 10 counties with grants. The programs

in Greene and Westmoreland will be run through the Conservation District while Washington's program will be handled by Penn State Cooperative Extension. It is wonderful to welcome these counties back into the program.

More news from the region: Allegheny County has been interviewing interns from the University of Pittsburgh Graduate School of Public Health to help with their summer projects. These interns are the most prepared and well-rounded students ever in the program. They've already helped with mapping data using the Arc GIS system. The agenda for Allegheny County's annual spring training class for municipal governments will soon be approved for update credits by the PA Department of Agriculture. The Municipal Tour highlights current public health issues that impact housing and the community environment. Allegheny County has always promoted partnering with local government, believing their efforts to communicate and educate the public are much more effective working together rather than going alone.

In Cambria County, the county com-

missioners are leading the charge to deal with blight, vacant and abandoned properties. The county is hosting a seminar on the Land Bank Act in Pennsylvania as a resource to dealing with these properties. The city of Johnstown has struggled to demolish properties that are considered public safety dangers. At a cost of approximately 8,000 to 12,000 dollars per property this has become a major financial burden to the already financially distressed city. The city demolished 32 properties in 2016, a drop in the bucket for the many that are slated to be torn down. As the city removes properties, more and more continue to be added. Along with the obvious dangers of these properties as a safety issue, those of us in vector management are aware of the many other public health dangers associated with these properties. While they provide ample mosquito surveillance possibilities, they also pose a risk for public health. Unfortunately, there appears to be no good solution for this issue and I expect it will continue to plague cities in Pennsylvania for many years to come.

## What's Happening in Region 6

Submitted by Ted Bean



As we prepare for mosquito season after a rather mild winter with a lot of precipitation in Northwestern Pennsylvania, Karen Tobin reports a record number of Lyme disease cases in Erie County during 2016. There are currently 196 cases reported for 2016 which is up dramatically from the previous high of 71 in 2015. It is likely that this increase is due, in part, to the increased awareness by individuals to submit ticks for identification and seek treatment as well as an increase in awareness by physicians to test and treat for Lyme disease.

In 2016, the Erie County Department of Health received a grant for Lyme disease and tick awareness. Together with their partners on the Northwest Pennsylvania Task Force, over 6500 brochures and over 9000 tick identification cards were distributed. Sixty trail signs were also distributed to municipalities to identify locations where ticks may be present and to encourage preventative measures be taken by hikers. The Erie County Department of Health is seeking additional funds in 2017 to continue the educational campaign for physicians, school nurses, veterinarians and the general public.

Erie County Department of Health also assisted the Northwest District office of the PA Department of Health with the distribution of Tick

and Lyme Disease Surveys. Over 2,100 surveys were completed by Northwestern PA residents to assess their knowledge of tick and Lyme disease, risk factors, and prevention. Results of the survey are pending.

Erie County will also be assisting the Northwest District office of PA Department of Health with the distribution of a Rabies Awareness Survey. Their goal is to have 2,500 households respond to the survey throughout western Pennsylvania. Surveys will be distributed February 1-September 30, 2017.

2017 plans for mosquito control include distribution of repellent, mosquito dunks and door hangers in neighborhoods where West Nile positive mosquitoes are found.

*(Continued from Page 2)*

and not used in the 2015 decision. The court has granted the agency's request for a new review to be submitted by March 31, 2017, and to stay the court proceedings until then. The plaintiffs were against a stay, saying the issue supports their belief that the agency erred in evaluating the petition.

In the end, Mr. Yearwood hopes the court will decide in his favor. "We're not saying that there are no bugs in the hole," he said. "What we're saying is that the bone cave harvestman is not in danger because it's in every cave and non-cave around."

Article Credit: Tawnell D. Hobbs, The Wall Street Journal, January 5, 2017.

<https://www.wsj.com/articles/tiny-spider-like-creature-roils-big-texas-ranch-1483641053>

*(Continued from Page 3)* outfitted with mosquito-attracting bait and a fan, and suck in whatever insect gets close enough. Entomologists later sort the bugs for the ones they want.

Jackson's trap consists of 64 "smart cells," compartments outfitted with an infrared light beam. When an insect crosses the beam, its shadow changes the light intensity in a way that forms almost a fingerprint for that species, Jackson said.

Program the trap for the desired species – such as the *Aedes aegypti* mosquito that is the main Zika threat – and when one flies into a cell, its door snaps closed. In pilot testing in Harris County, Texas, in July and August, the trap was more than 90 percent accurate in identifying the insect buzzing through the door, Jackson said.

Harris County already is well known in public health for strong mosquito surveillance, and had been keeping a sharp eye out for Zika – fortunately finding none.

But mosquito control director Mustapha Debboun called the high-tech trap promising, and is looking forward to larger scale testing this summer. "If we are trying to collect the Zika virus mosquito, you can teach this trap to collect just that mosquito," he said.

When each mosquito is captured, sensors record the time, temperature, humidity and other factors, to show what environmental conditions have different species buzzing. That's information officials might use to schedule pesticide spraying.

Article Credit: Lauren Neergaard, AP Medical Writer, February 16, 2017.

<http://www.jsonline.com/story/money/business/2017/02/16/new-mosquito-trap-smart-enough-keep-just-bad-bugs/98017046/>

## Reviewing Exceptions to Hypersensitive Notification

Written by: Tom Smith

Prior to performing any pesticide applications requires a quick check of the Pennsylvania Department of Agriculture's Pesticide Hypersensitivity Registry. Fortunately, most applications don't have anyone listed in the vicinity and business continues as usual. However, sometimes a registrant is found and notice of a pesticide application may be required. Please refer to the latest copy of the Pesticide Hypersensitivity Registry for specific requirements. The requirements are fairly straightforward. Issues seem to come about when considering the exceptions that do not require notification.

While attending a Penn State Extension Pesticide Education program in December 2016, a review was provided about some of the noted exceptions. Four of the exceptions listed in the Pesticide Hypersensitivity Registry are fairly simple to understand. These relate to using tamper-resistant bait stations, injecting



**Detached Structure**

pesticides into a tree or utility pole, using swimming pool maintenance chemicals and using a disinfectant or sanitizer. Confusion occurs when determining if a pesticide application is within a detached structure or directly below the soil surface. Many times catch basins are referred to as structures and this may create confusion for mosquito control.

The Pennsylvania Department of Agriculture is the regulatory authority and their definitions apply. The definition of a structure in this case refers to a building: house, barn, shed, etc. which does not include catch basins, swimming pools or backyard water features.

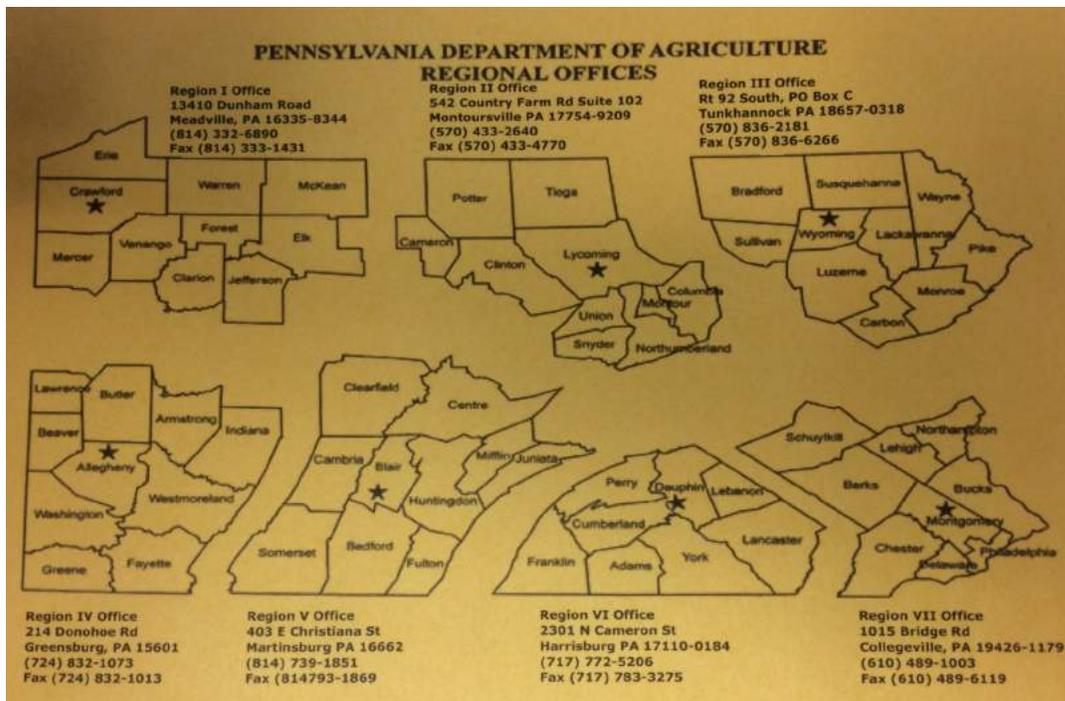


**Attached Structure**

Therefore, notification must be given if a listed individual is within 500 feet of these sources.

Another exception is applying a pesticide directly below the soil surface. Again, catch basins are below grade but since the water is exposed to the air, catch basins do not meet this exception.

If you ever have any questions about Pesticide Hypersensitivity Registry Notification requirements please contact your regional PDA office. A map is shown below or visit: [www.agriculture.pa.gov](http://www.agriculture.pa.gov) and search for Regional Offices.



## While Brazil Was Eradicating Zika Mosquitoes, America Made Them Into Weapons

Submitted by: Tom Smith

Most of the Western hemisphere was trying to eliminate *Aedes aegypti*. Why not the U.S.?

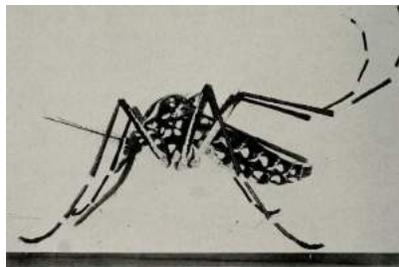
The exact moment when one of the world's most dangerous mosquitoes arrived in the Americas is unknown. It's clear that they came from Africa, and they may have crossed the Atlantic as early as 1495, on some of the first European ships to reach Hispanola. By 1648, when yellow fever broke out on the Yucatan peninsula, *Aedes aegypti* had definitely arrived.

Their behavior upon arrival, though, was unusual. Most of the world's 3,500-plus mosquito species are innocent of lust for human blood but on these long journeys across the sea, the mosquitoes that survived were the ones willing to bite humans. Female mosquitoes need blood to lay eggs. En route to America, *A. aegypti* learned to love ours.

Now, *A. aegypti* is one of our boon companions, an unwanted, constant domestic creature that house-broke itself. By the 1930s, this species was found in every country in South and Central America, throughout the Caribbean and

across the American southeast. Along with it came the viruses it spread—yellow fever, which once killed a third of the people it infected; dengue, also called breakbone fever because its aches were so painful; and now, Zika.

Its growth, though, was not inevitable. Half a century ago, it would not have been possible for *A. aegypti* to spread Zika in Brazil. In 1958, Brazil was declared free of the mosquito and was leading an effort to eradicate it from this hemisphere. Eradication was to be the culmination of decades of work, by scientists who let themselves be infected with yellow fever, by an Alabama soldier determined to clean up Cuba, and by a fanatical epidemiologist with an au-



An *Aedes aegypti* mosquito. (Photo Credit: Illinois Natural History Survey Division/Public domain)

thoritarian streak, to beat both *Aedes aegypti* and the diseases it carried.

The United States has had a complicated relationship with *A. aegypti*. Today's Congress has been reluctant to allocate funds to fight Zika: President Obama asked for emergency funding in February, and it's taken until June to get close to an acceptable deal. This hesitation is in keeping with the American government's history with the *A. aegypti* mosquito. Even while American money was funding eradication efforts, led by Americans, in countries further south, the American government was one of the last holdouts in the hemisphere-wide effort to destroy *A. aegypti*. At the same time as the U.S. Public Health Service at last started trying to eradicate *Aedes aegypti* from the southeast, another branch of the U.S. government was planning to raise colonies of millions of *A. aegypti* mosquitos, to use as biological weapons.

Article Credit: Sarah Laskow, June 22, 2016, <http://www.atlasobscura.com/articles/while-brazil-was-eradicating-zika-mosquitoes-america-made-them-into-weapons>

## Pennsylvania Again Leads Nation in Lyme Disease Cases

Submitted by: Tom Smith

Pennsylvania will once again lead the nation this year in Lyme disease cases, according to preliminary data released Thursday by the Centers of Disease Control and Prevention.

And it's not even close. In 2016, there have been 12,092 reported cases of the tick-borne disease in the state through Dec. 24. That's triple the amount of the runner-up, New York, which had 4,002 cases, followed by

New Jersey with 3,850.

There were about 9,000 cases in Pennsylvania in 2015, according to the CDC.

A state Department of Health spokeswoman cautioned that the 2016 figures aren't finalized yet, but they still highlight the need for people to protect themselves from ticks, especially during warmer months.

"It's clearly an issue in Pennsylvania," said April Hutcheson of the Department of Health. "If you suspect you have Lyme disease, catching it early is really essential."

Article Credit: Ben Schmitt, December 29, 2016, Trib Live. <http://triblive.com/local/allegHENY/11706467-74/disease-lyme-pennsylvania>

## Cyanide device explodes, killing family's dog. They can't believe who planted it behind their home.

Submitted by: Tom Smith

Canyon Mansfield was on a walk Thursday with his dog Casey on a hill behind his family's Pocatello, Idaho, home when he noticed a pipe-like object sticking out of the snow-covered ground.

"I go over and touch it," Mansfield, 14, told the East Idaho News. "Then it makes a pop sound, and it spews orange gas everywhere."

The gas was cyanide, the paper said, and it hit Mansfield's left eye and clothing. So he washed out his eye with snow, the News said.

But then he noticed his dog was in trouble. Turns out the wind blew the cyanide right into Casey's face, the News reported.

"I look over and see him having a seizure," the tearful teen told the paper. "I ran over, and he had these glassy eyes. He couldn't see me, and he had this red stuff coming out of his mouth. So I was freaking out."

Mansfield sprinted down the hill and told his mother Theresa what had happened, the News reported, and the pair ran back up to attend to Casey — but their 3-year-old yellow Lab was dead.



The Mansfields' dog, Casey, died when the wind blew the cyanide into his face. (Image source: YouTube screen cap)

Theresa Mansfield called police and then her husband Mark, a medical doctor, the paper said.

"I hurried home, and the first thing I did was try to resuscitate the dog," Mark Mansfield told the News. "Unfortunately, I exposed myself to cyanide and had no idea."

After hours of investigation, the paper said it was determined that their dog Casey was exposed to an M-44 — a spring-activated device that releases cyanide when it's pressed or pulled upward. The News added that the U.S. Department of Agriculture employs the M-44s for coyote control.

The revelation was no relief to the Mansfields, whom the paper said had never seen such a device in their neighborhood during the 10 years they've lived there.

"We didn't know anything about it. No neighborhood notifications, and our local authorities didn't know anything about them," Mark Mansfield told the News. "The sheriff deputies who went up there didn't even know what a cyanide bomb was."

The family told the paper the M-44 that killed their dog was planted on their property's border.

"We weren't aware, and nobody told us," Theresa Mansfield told the News. "There was nothing posted up on the hill saying to beware or be careful."

The Mansfields, along with responding deputies, had blood drawn to make sure they were in the clear after the cyanide exposure, the paper said.

The U.S. Department of Agriculture Wildlife Services told the News the incident was Idaho's first unintentional M-44 discharge since 2014.

"Wildlife Services understands the close bonds between people and their pets and sincerely regrets such losses,"

R. Andre Bell, a spokesman for the USDA, told the paper in a statement. "Wildlife Services has removed M-44s in that immediate area ... and is completing a thorough review of the circumstances of this incident ... to determine whether improvements can be made to reduce the likelihood of similar occurrences happening in the future."

But many unanswered questions remain. For one, the clothes Canyon Mansfield was wearing at the time of the cyanide explosion are in a sealed plastic bag, the News said — his family isn't sure what to do with them.

"We couldn't even have a proper burial for Casey because we didn't know how to deal with cyanide," Theresa Mansfield told the paper. "No one knows how to deal with cyanide."

And while another M-44 was found about 50 yards from the first device, the Mansfields told the News they're not sure if there are others.

"Three hundred yards from this swing set next to my house, there were two cyanide bombs," Mark Mansfield told the News. "It kills anything. It almost killed my child, and it did kill my dog. I don't want it to kill my neighbors."

Also, the Mansfields told the paper that as of Friday no one from the USDA apologized to them for the incident.

"If you plant bombs by our house, just tell us," Canyon Mansfield told the News. "By the grace of God, I'm still alive."

Article Credit: Dave Urbanski, theblaze.com, March 21, 2017. <http://www.theblaze.com/news/2017/03/21/cyanide-device-explodes-killing-familys-dog-they-cant-believe-who-planted-it-behind-their-home/>

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## Calendar of Events

March 1 - May 31, 2017: Great American Cleanup of Pennsylvania

May 15 - 17, 2017: AMCA Washington Days Conference

June 19 - 25, 2017: Pollinator Week

June 25 - July 1, 2017: National Mosquito Control Awareness Week

July 7 - 9, 2017: Mothapalooza, West Portsmouth, OH

August 15 - 17, 2017: Penn State Ag Progress Days

November 3 - 4, 2017: Pennsylvania State Beekeepers Association Annual Meeting, State College, PA

November 5 - 8, 2017: Entomological Society of America Annual Meeting, Denver, CO

November 7 - 9, 2017: PVCA Conference, State College, PA



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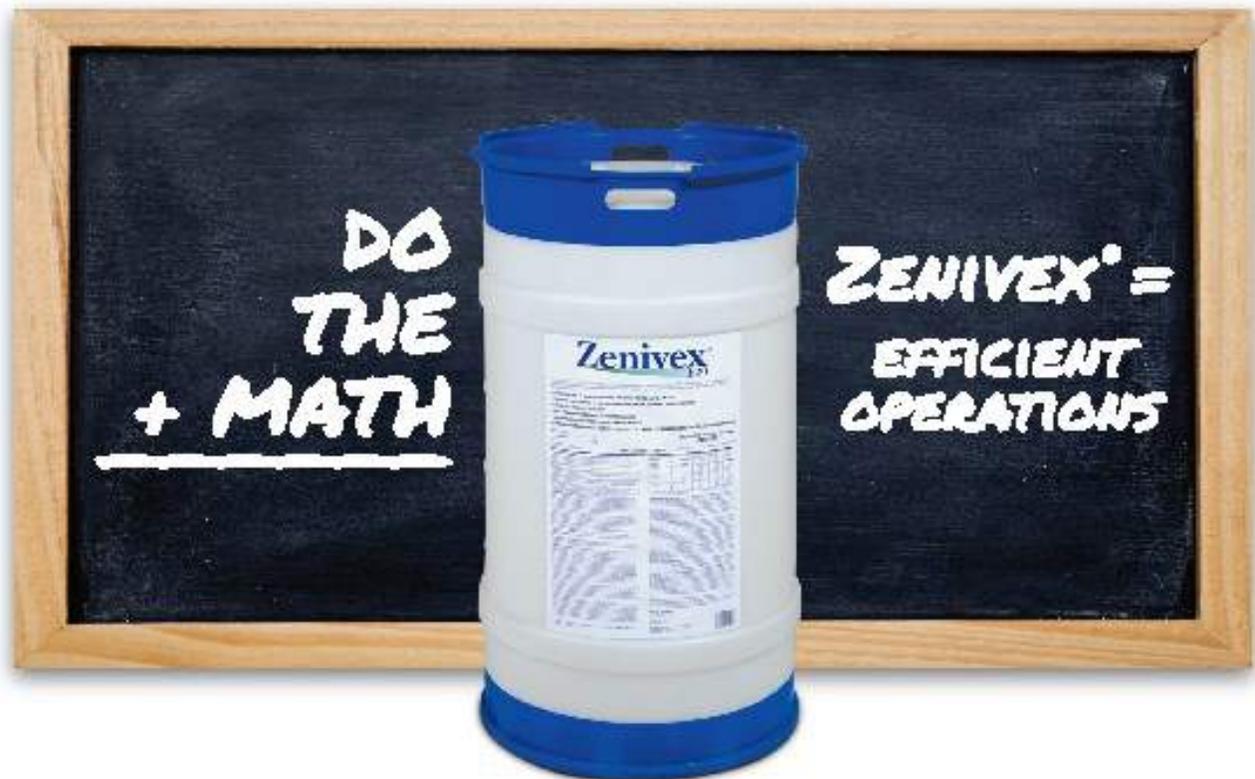
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The Pennsylvania Vector is an informational news letter, written and produced for the purpose of providing the members of the PVCA with updates on activities conducted by this group and to highlight innovations made in the field of vector control. Articles herein have been reviewed for content and to the best of my knowledge contain the most current information available. The Pennsylvania Vector will be mailed to organization members, with past editions available in PDF format on the PVCA web site at [www.pavectorcontrol.org](http://www.pavectorcontrol.org).

Items posted in "The Pennsylvania Vector" are submitted by the general membership and staff. Posting herein allows for the widest dissemination to all members of the organization. Should a listed event be cancelled or rescheduled (after publication), revisions will not be printed or mailed to the membership as part of the News Letter process. These revisions should be submitted as soon as possible by email or fax to the PVCA web site.

Organizations are encouraged to submit News Letter articles and can do so by contacting this office. Cut-off dates : Feb 15th, Jun 15th, and Oct 15th. Publications will be issued March, July, and November.

### PRESIDENT'S Corner

#### Leah Lamonte



I'm thankful for the opportunity to have attended AMCA in San Diego in February. This national meeting of mosquito control professionals had over 1100 attendees with a plethora of talks on West Nile, Zika, the spread of invasive *Aedes* species, the use of drones in surveillance and control, and transgenic mosquitoes. It was a wonderful time to network, talk with vendors, and hear cutting edge topics of the mosquito world.

The PVCA board looks forward to the spring planning meeting being held in State College on April 20th at the Days Inn. During that meeting, we plan the fall conference and discuss things relevant to our organization. If you have any items that you would like us to discuss or suggested speakers for the conference, please email me at [llamonte@achd.net](mailto:llamonte@achd.net). Also, please save the tentative dates of Tuesday, Nov. 7th to Thursday, Nov. 9th for our annual conference. Friday, Nov. 10th is the observed Veterans Day holiday for government employees.

Lastly, if anyone is interested in attending AMCA's Annual Washington Conference on May 15-17, 2017, please let me know. PVCA and Central Life Sciences are both offering stipends to send members to this meeting to lobby on Capitol Hill for issues pertaining to mosquito control.

Leah Lamonte

### EDITOR'S Corner

#### Tom Smith



Hi Everyone,

First, I would like to welcome our new regional vice presidents and thank them for providing their reports in a timely manner.

Since our last newsletter, a lot has changed on the political scene. If people truly want to see an improvement it's going to require a local effort. How many times have you been asked why isn't something being done eliminate mosquito concerns? The election cycle this year is for local municipalities and school district boards. Many of the complaints we routinely receive could be prevented if local government did its job properly. Common issues such as property maintenance, stormwater management and teaching IPM come to mind.

For this year, take time to educate residents that everyone has a responsibility to be part of the solution for these concerns.

Thank you,  
Tom Smith