

# The Pennsylvania Vector

Spreading News to the Vector Control Community

Volume 6, Issue 2

July 15, 2008

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### Special points of interest:

- PVCA Annual Award
- Updates on Bat Fungus

#### From *Mosquito*

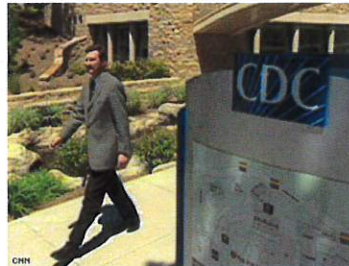
**"As we have seen, history is filled with the mortal results of encounters between endemic microbes of one region and non-immune people from another. Whether the people go to the pathogen—or the virus goes to the people—the outcome is the same." (comparing spread of Malaria, Yellow fever, West Nile fever.)**

## CDC expert gets West Nile bug—literally

By Judy Fortin, CNN Medical Correspondent

June 25, 2008

All Lyle Petersen wanted to do was get his mail.



In the time it took him to walk down his driveway in Fort Collins, Colorado, chat briefly with a neighbor and return to his house, Petersen got infected with a potentially serious mosquito-borne illness called West Nile virus. Within hours of being bitten, he said, he began to feel symptoms he recognized.

And how was he sure so quickly? Petersen, as director of the division of vector borne diseases at the Centers for Disease Control and Prevention, is one of the foremost experts in the world on the condition. A blood test confirmed his suspicion.

"From my own experience, I can tell you it's not a very mild illness," Petersen cautioned. "It will ruin your summer."

Experts are expecting another epidemic of the disease this summer. The incidence of West Nile virus has remained the same for the past four years, and Petersen says he doesn't expect this year to be any different. It should reach its peak between mid-July and mid-September.

"People tend to discount this as a significant problem," Petersen said, "but more than 1.5 million people have been infected so far in the United States, and about 300,000 have had West Nile fever."

West Nile virus emerged in the U.S. nine years ago. The virus is spread by the bite of an infected mosquito. Mosquitoes contract the illness by feeding on infected birds.

The CDC reported that in rare cases, West Nile virus has

spread through blood transfusions, organ transplants and breastfeeding. The disease is not spread through casual contact. The symptoms range from mild to severe and typically develop between three and 14 days after a person is bitten.

Debbie Koma, a 50-year old hairdresser from Atlanta, Georgia, developed West Nile virus two years ago. She described it as "unlike anything that I ever had before. I was sick as a dog."

She recalled being hospitalized for three days with a high fever, a horrible headache and body aches. After 14 days, she was strong enough to get out of bed, but she says her strength didn't fully return for three months.

*Petersen had a similar experience when he was stricken five years ago. "I discovered I had **West Nile virus** because I am a long-distance runner," he said.*

*(Continued on page #8)*



# What's Happening in Region 1

Submitted by Ben Russell



Southeastern PA has seen a rapid increase in larval mosquito numbers in the past month. The early June heat wave was the tipping point between

a slow spring build-up and an early summer jump in numbers. DEP and county officials have begun targeted spraying operations throughout the region. During June, the region has seen truck mounted ULV operations in Delaware Co., Chester Co., Montgomery Co., Bucks Co. (totaling 30 road miles), and in Philadelphia. While there have been no WNV positive mosquito pools in the region to date, high adult numbers of *Cx. pipiens*, *Cx. restuans*, and *Cx. salinarius* have prompted these operations.

Philadelphia Health Dept. (PDPH) vec-

tor control staff are busy getting ready for the Welcome America Fourth of July celebration.. Increased rodent and mosquito control operations have been taking place along the Benjamin Franklin Parkway, throughout Fairmount Park, and in the Penn's Landing area.

Bucks Co. has seen some rabies activity with two positive raccoons and one positive cat so far this year. Bucks' 11 rabies cases in 2007 included one groundhog which coordinator Phil Smith states in an unusual occurrence for the area.

Recently, PDPH vector personnel were called to the Philadelphia International Airport for an unusual incident. During a routine bag check, a TSA employee suddenly yelled out and claimed to have been bitten by some sort of insect. The unfortunate owner of the bag was pulled aside and his backpack was quarantined. The traveler was allowed to con-

tinue his trip back to Virginia Beach from a job interview in New Mexico. The threatening piece of carryon luggage was double bagged and removed to the outside. When PDPH employees Bill Ferraro and Rosalie Neris arrived, they performed a thorough check of the bag and its contents. This outdoor inspection of the bag by gloved personnel was conducted within sight of the SEPTA regional rail line serving the airport and gave train passengers quite a site. TSA insisted the bag remain outside until it was properly searched for insect terrorists. In the end, no insects, deadly or otherwise, were located. The bag was forwarded by TSA to Virginia Beach to be reunited with its owner.

# What's Happening in Region 2

Submitted by Cliff Pristas



Record high trap counts of *Culex restuans* throughout the NE have kept us busy to say the least.

▲ A single trap count of 2015 *Cx. restuans* was collected in the lake Winola Area of Wyoming County, Falls Twp.

Sarah and Jackie attended the Washington days AMCA event, along with another member of PVCA. We will be receiving a presentation at the annual conference as to how the event was received.

PVCA members, accompanied by DEP Staff, met with Dr. Thomas and Dr. Reed on May 7th. This is the key to a good partnership between the PSU and PVCA. A special thanks to Norm Conrad for getting this meeting to happen.

Luzerne County had the first WNV positive mosquito sample of the year

on 6/5/08 *Cx. restuans*. County and DEP staff responded with increased surveillance and truck mounted ULV control work in the area. In addition to Luzerne County; Wayne, Wyoming, and Lackawanna have all done truck mounted ULV control work in response to extremely high *Cx. restuans* counts.



While on patrol one day, we came across these rare pitcher plants in bloom and we thought to share them with you. I'd tell you the location, but it's a secret bog in Pike County where my intern Chris Weinman and I conduct some of our most strenuous work.



Following AMCA's public outreach suggestions, our region held an event at McDade Park in Lackawanna Co.



In the picture are Len Forte, Cliff Pristas, Mark Carmon (DEP NERO press liason), Chris and Sarah.



## What's Happening in Region 3

Submitted by Christian Boyer



Through the first week of July, there have been 2,960 pools of mosquitoes tested in

Region 3. This is 1,000 more than last year during the same time period. The increase is due to the larger than normal *Culex* populations. *Culex* mosquitoes are at levels equaling or exceeding what they were during the outbreak year of 2003. Due to the high numbers of *Culex* mosquitoes that have been collected throughout the region, all but three counties have conducted adulticiding operations to keep those populations at the lowest levels possible to reduce the chance of amplification of the virus.

Region 3 has reported one positive mosquito pool so far in 2008. The positive *Culex pipiens* pool was collected in Lancaster County on June 10th. This is the earliest that Lancaster has ever collected a positive mosquito.

There have only been five dead birds submitted for testing in Region 3 and all have tested negative. Dead bird sightings and submissions have decreased in recent years due to the *Corvid* and raptor restrictions. This protocol was again adopted due to the lack of positives seen in other species of birds.

Doug Orr provided the following information about the Black Fly program. The first treatment of the season was conducted on April 29.

To date the Susquehanna River has been treated 8 times and the Juniata River 7 times as well as periodic treatments of tributaries to both rivers. June proved to be a challenging month due to heavy algal loads and poor mortality on several streams including the Susquehanna and Juniata Rivers. Low flows are now creating the problem of poor carry distance of the Vectobac 12AS, which is typical for this time of year.

Despite all of these setbacks and problems, the Program has successfully held the black fly population in the Southcentral Region below pest level throughout most of the Region.

## What's Happening in Region 4

Submitted by Greg Molter



Region 4 has been having a very busy season hunting down habitat for *Culex* mosquitoes.

County personnel throughout the region have been spending most of their time in the field. Although suitable mosquito habitat can be found almost anywhere throughout the state, many of our regional programs are having problems locating the source of their hatches.

We have aggressively treated catch basins in several of our counties, using both granular and water soluble products. I have concluded the use of water

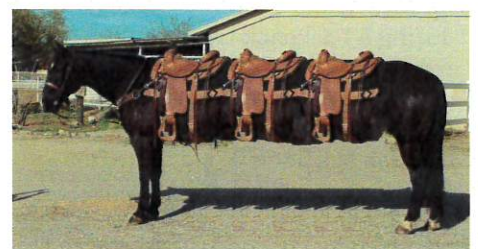
soluble packets to be the most expedient and cost effective method for treating catch basins in my county. Others may find alternate products work better.



With all the surveillance and spraying we do, we made sure to get pictures of our traps and equipment to the local authorities and 911. We also maintain contact with our 911 dispatchers during spray operations as a safety precaution.

That has also come in handy when local police are responding to calls about strange looking people spraying stuff in the neighborhood.

WNV has shown up in several of our counties this year. Sullivan, Columbia, Montour, Snyder, Centre, Clinton and Lycoming have all recorded at least one positive. Hang in there. The season is still some time from being over, but we have found an answer to high gas prices: The Texas Limousine. YAHOO!



## What's Happening in Region 5

Submitted By Leah Lamonte



The Southwest region counties have hit the ground running since early spring 2008. Our annual kickoff meeting

was held in April in Westmoreland County and marked the beginning of yet another summer controlling the threat of West Nile virus.

Allegheny County had a busy spring treating approximately fifty floodwater nuisance sites in addition to holding municipal training classes. These vector control training classes reached 125 staff from 71 municipalities in Allegheny County. Eighty-three of the municipal staff are also certified to apply pesticides and are helpful in resolving prob-

lems with rats and mosquitoes. Thirty employees of Allegheny County Health Department also took part in the training classes and are certified pesticide applicators that help with the annual City of Pittsburgh Catch Basin program.

The first round of the Catch Basin Program took place June 19<sup>th</sup> to June 26<sup>th</sup> with Health Department teams treating approximately 18,000 catch basins within the City of Pittsburgh. This yearly chore is an important part of Allegheny County's WNV Control Program as the majority of positive mosquito pools are collected within city boundaries.

As of date, Indiana County has conducted three barrier and three ULV treatments with more planned for

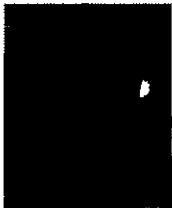
the future. In the first part of the summer, Indiana had over forty individual sites with adult numbers topping 100+ per trap per night all of which were *Culex restuans*.

The Southwest region had its first WNV positive of the season—a *C. restuans* mosquito pool collected on June 24<sup>th</sup> in Wilkinsburg Borough, Allegheny County. Heightened surveillance, control, and public education were conducted in Wilkinsburg as this borough is historically a "hot" WNV area due to urban mosquito breeding.

Finally, the Southwest region would like to welcome Dustin Teegarden to the WNV program. As of May, he replaced Terri Davin as the WNV coordinator for Greene County.

## What's Happening in Region 6

Submitted by Bill Andrus



The following regional update was prepared by a new member of the team. Jessica Miller has joined us as a staff biologist. We'll bring

you more excitement next edition.

The Black Fly Spray season has kicked off to a great start for the Ohio River Basin Contract. With 8 sprays under our belt since May, we have gotten many good remarks from local outdoor adventurers. One Portland Mills resident caught up with Water Pollution Biologists during a backpack treatment and reported that, "The Black flies aren't as bad they were in the past." He was also grateful that he is able to enjoy long days of black fly free fishing on the Clarion River.

So far, Black Fly populations around the Allegheny and Clarion Rivers as well as a majority of the creeks have all been responsive to this year's treatments. Heavy rains and thunderstorms made larval and adult sampling difficult in the past few weeks but they did not delay any spray efforts. The higher stream flows allow for better carry of Bti and generally produce higher kill rates.

The Black Fly Suppression Program in the Meadville office is now staffed by two biologists and three interns. The addition of a second biologist during Black Fly season has provided a more efficient use of time and resources. The Pittsburgh Region Program is being staffed by a Biologist and an intern. Together this team covers all of Western Pennsylvania.

Regional West Nile Staff have been busy battling high mosquito numbers brought on by early summer rains. Although gravid trap numbers remain low, traps baited with carbon dioxide are catching mosquitoes by the hundreds near woodland pools and other flooded areas. Several spray operations have been conducted to reduce mosquito numbers near residential areas. As of July 11<sup>th</sup>, there have been no West Nile positive mosquitoes, horses or humans in Northwestern Pennsylvania in 2008.

By: Jessica Miller

# Control program rids Lake Placid of pests

By HEATHER SACKETT, Staff Writer, Lake Placid News

A team of expertly trained killers are roaming the woods and fields around Lake Placid, making sure you and your family won't get eaten this summer - by the black fly.

Infamous throughout the Adirondacks, the black fly is the notorious pest that everyone loves to hate. Since its inception 15 years ago the North Elba Black Fly Control Program has been using Bti (*Bacillus thuringiensis israelensis*) as its weapon against the annoying critters.

From April 1 through mid-July, black fly technicians cover a 90-square-mile area centered around the village of Lake Placid from MacKenzie Pond in the west to Mount Van Hoevenberg in the east, and from the end of Averyville Road in the south to Whiteface Landing in the north. That includes about 250 miles of waterways.

The town of North Elba is one of the most extensive of the roughly 30 Adirondack townships that have a black fly control program.

Black flies are considered more of a nuisance than other biting insects because they are out during the day and their bites are painful, as opposed to things like mosquitoes, which can be avoided by staying away from wooded areas and bodies of water during dusk and dawn when they are most active.

Lake Placid Mayor Jamie Rogers remembers what springtime was like before the Bti program. "There's been a massive improvement," he said. "I can remember just going out to play baseball in the springtime and they would be literally at times so thick you would breathe some of them in."

Rogers added that the black flies negatively affected the spring tourism economy as well. "People take for granted that black flies don't exist in the village anymore." Rogers, who is also a fisherman, said he doubts that reduc-

ing the black fly population has a negative impact on the trout population because of the abundance of other insects as a food source.

"The program speaks for itself," said North Elba Black Fly Control Program Director John Reilly. "People are out in May playing golf and tennis in T-shirts. Without the program you wouldn't be able to do that."

Bti targets just the black fly larvae (and sometimes another insect larvae that hatches to become no-see-ums), is 99 percent effective at killing them, and no traces of the pesticide can be found 24 hours after a stream has been treated.

Black fly larvae attach themselves to rocks, sticks or aquatic plants and feed on the nutrients in the moving water. Bti only kills black flies that are in this larval stage, which is what the technicians look for before adding the pesticide to a stream. Because of the very alkaline pH in the stomach of black fly larvae, eating Bti will kill it, usually within a day.

Five field technicians plus Reilly venture out into the woods and methodically monitor streams for black fly larvae. The width, depth, velocity and temperature of streams must be calculated so technicians know how much of the pesticide to use in each place.

Reilly explained that black flies thrive in cold, moving water so technicians try to hit every tiny tributary, even those that don't appear on the most detailed maps available. To be as thorough as possible, sometimes the technicians look for a depression in a topographical map and go see if there is a remote, uncharted stream there that needs to be treated.

"The stuff works," Reilly said. "The hard part is getting the humans up into the places." Technicians begin their day in the office on the third floor of the North Elba Town Hall where they plan which streams they will hit, check to make sure private property owners have granted

them permission to access streams, and mark down when they expect to return from the field. Their days are spent largely in the wilderness, finding larvae in streams, killing them, then going back the next day to see how many of the bugs the treatment wiped out.

Technicians are outfitted with a signature red ball cap, a pack, map and compass, first aid kit, a town-issued cell phone, snowshoes in early spring, waders, a log book and the pesticide. A lot of their time is spent off the beaten path, bushwhacking. After a day in the field, technicians return to the town hall and mark off the area they treated on a wall map.

This has been a banner year for the black fly, with some larvae surviving through the winter, something Reilly said he has never seen before. Most areas will receive at least two treatments per season; those areas closest to town may receive up to ten.

According to Reilly, before the Bti program, planes carrying the chemicals methoxychlor and diatom mixed with kerosene would spray the ground, killing most flying insects. It wasn't that effective on black flies, though it did kill bumble bees, and the negative health effects on humans and other animals are obvious.

Reilly has been director of the program for the past four years, but has been working as a technician since the beginning of the program. His favorite part of the job is the time he gets to spend outdoors.

"Just getting out in the woods and going to places off the trail you normally wouldn't get to," he said.

He said he has also had rare opportunities to experience wildlife while in the field, like seeing signs of moose and the pine marten he recently spotted.

"Those are the fringe benefits," he said. "Plus all the fresh air you can breathe."



## SAFETY

**STOP & THINK:** Many afternoons this season we have had temperatures in the high 80s and 90s, with humidity ranging anywhere from 90 to 100%. If the pattern holds true, we may experience many more of these high temperatures before we're out of the field for the year. With that in mind, let's focus on personal safety regarding this issue.

The human body (which we all rely on heavily) has a lot of built in safety features to protect us from disease and injury. The complexities go way beyond my comprehension, and attending medical school was never my ambition. But I do know that we can cause our bodies to shut down and become damaged if we don't follow some of the same simple rules we use on our equipment.

**1. Check fluid levels often. 2. Ensure adequate and proper fuels are used at all times. 3. Do not expose to direct sunlight or extreme temperatures for extended periods of time. 4. Do not push equipment beyond it's limits. 5. Routinely schedule equipment for inspections and maintenance.** Don't wait until your radiator cap blows to add water; you could end up with more than a cracked block.



## DID YOU KNOW? A Taste of Insect Trivia

(From 1001 facts about insects)

**Did you know:** An aphid gives birth to 50 young in a week. If they and their young survived, within a year the planet would be 93 miles deep in aphids.

**Did you know:** The rat flea is considered to be the main cause of the Black Death, or plague, that killed about 35 million people in China and over half of all the people in Italy in the 1300's.

**Did you know:** All the world's insects are descended from a single ancestor. Onychophoran, which still crawl the planet today, are believed to be the grand daddy of all arthropods.

**Did you know:** Of all pests, the mosquito has the most "kills". More than half of all deaths since the Stone Age have been due to the Malaria carrying mosquitoes.

**Did you know:** The insect with the longest proboscis is a hawk-moth. It unrolls into a 10 inch straw—exactly the right size for the hawk-moth to sip nectar from the flowers of the star orchid of Madagascar.

**Did you know....**all *Culex pipiens* embryo develop in a heads down position in the egg raft.

## Conference Reimbursement Grant Program

Submitted By Christian Boyer

The Pennsylvania Vector Control Association has approved and developed a grant program whereby the organization will reimburse 1 applicant per year, up to \$500 to attend a vector related conference other than our own. Anyone interested in participating in this program is encouraged to fill out the application on PVCA's website ([www.pavectorcontrol.org](http://www.pavectorcontrol.org)).

The proposed conference must be scheduled to take place after our annual conference in 2008, but before the end of December of 2009. All applications must be submitted to the association by November 1st, 2008. Applications will be reviewed and graded by the PVCA Awards Committee and the selected applicant will be announced during the business meeting at this year's conference.

Recipient will be expected to provide receipts for the reimbursed amount and must be willing to give the association a presentation (written or oral) of the conference attended.



# Sometimes You Just Have to Share

Submitted by Jacquelyn A. Hakim

You never know when a question will pop up and these little tidbits of information might just be the answer you're looking for. Check them out.

## Stringy Things on your banana

Peel a banana from the bottom and you won't have to pick the little 'stringy things' off of it. That's how the primates do it! Take your bananas apart when you get home from the store. If you leave them connected at the stem, they ripen faster.

## Keep Your Cheese Fresh

Store your opened chunks of cheese in aluminum foil. It will stay fresh much longer and not mold!

## Choose Wisely

Peppers with 3 bumps on the bottom are sweeter and better for eating.

Peppers with 4 bumps on the bottom are firmer and better for cooking.

## No Grease in Your Ground Beef

Add a teaspoon of water when frying ground beef. It will help pull the grease away from the meat while cooking.

## Richer Scrambled Eggs

To really make scrambled eggs or omelets rich add a couple of spoonfuls of sour cream, cream cheese, or heavy cream in and then beat them up.

## Minty Brownies

For a cool brownie treat, make brownies as directed. Melt Andes mints in double broiler and pour over warm brownies. Let set for a wonderful minty frosting.

## Timing is Everything

Add garlic immediately to a recipe if you want a light taste of garlic and at the end of the recipe if you want a stronger taste of garlic.

## Bring on the Kids Candy

Leftover snickers bars from Halloween make a delicious dessert. Simply chop them up with the food chopper. Peel, core and slice a few apples. Place them in a baking dish and sprinkle the chopped candy bars over the apples.

Bake at 350 for 15 minutes!!! Serve alone or with vanilla ice cream.

Yummm!

## Reheat Pizza

Heat up leftover pizza in a nonstick skillet on top of the stove, set heat to medium and heat till warm. This keeps the crust crispy. No soggy micro pizza. I

## Easy Deviled Eggs

Put cooked egg yolks in a zip lock bag. Seal, mash till they are all broken up. Add remainder of ingredients, reseal, keep mashing it up mixing thoroughly, cut the tip of the baggy, squeeze mixture into egg. Just throw bag away when done easy clean up.

## Expanding Frosting

When you buy a container of cake frosting from the store, whip it with your mixer for a few minutes. You can double it in size. You get to frost more cake/cupcakes with the same amount. You also eat less sugar and calories per serving.

## Reheating refrigerated bread

To warm biscuits, pancakes, or muffins that were refrigerated, place them in a microwave with a cup of water. The increased moisture will keep the food moist and help it reheat faster.

## Newspaper weeds away

Start putting in your plants, work the nutrients in your soil. Wet newspapers, Put layers around the plants overlapping as you go cover with mulch and forget about weeds. Weeds will get through some gardening plastic they will not get through wet newspapers.

## Broken Glass?

Use a wet cotton ball or Q-tip to pick up the small shards of glass you can't see easily.

## No More Mosquitoes

Place a dryer sheet in your pocket. It will keep the mosquitoes away.

## Squirrel Away!

To keep squirrels from eating your plants, sprinkle your plants with cayenne pepper. The cayenne pepper doesn't hurt the plant and the squirrels won't come near it.

## Flexible vacuum

To get something out of a heat register or under the fridge add an empty paper towel roll or empty gift wrap roll to your vacuum. It can be bent or flattened to get in narrow openings.

## Reducing Static Cling

Pin a small safety pin to the seam of your slip and you will not have a clingy skirt Or dress. Same thing works with slacks that cling when wearing panty hose. Place pin in seam of slacks and ... ta da! .... static is gone.

## Measuring Cups

Before you pour sticky substances into a measuring cup, fill with hot water. Dump out the hot water, but don't dry cup. Next, add your ingredient, such as peanut butter, and watch how easily it comes right out.

## Foggy Windshield?

Hate foggy windshields? Buy a chalkboard eraser and keep it in the glove box of your car when the window s fog, rub with the eraser! Works better than a cloth!

## Reopening envelope

If you seal an envelope and then realize you forgot to include something inside, just place your sealed envelope in the freezer for an hour or two. Viola! It un-seals easily.

## Conditioner

Use your hair conditioner to shave your legs. It's cheaper than shaving cream and leaves your legs really smooth. It's also a great way to use up the conditioner you bought but didn't like when you tried it in your hair.

## Goodbye Fruit Flies

To get rid of pesky fruit flies, take a small glass, fill it 1/2' with Apple Cider Vinegar and 2 drops of dish washing liquid; mix well. You will find those flies drawn to the cup and gone forever!

## Get Rid of Ants

Put small piles of cornmeal where you see ants. They eat it, take it 'home,' can't digest it so it kills them. It may take a week or so, especially if it rains, but it works and you don't have the worry about pets or small children being harmed!

Editors Note: Being a member of the PVCA makes you family. This article just proves we want you to enjoy more than critters and catastrophes.

## CDC expert gets West Nile bug—literally

*(Continued from page 1)*

"About halfway through one of my runs, I felt terrible. Within a couple of hours, I was lying in bed with severe headaches, eye pain, muscle pain and fever, which lasted about a week. I basically couldn't get out of bed for a week."

It wasn't just Petersen who became sick, but his daughter and the neighbor were complaining of West Nile virus symptoms hours after being swarmed by mosquitoes at the mailbox.

A medical doctor, Petersen actually tested his own blood in the laboratory and diagnosed his own illness. Like Koma, he was sick for a couple of months. His chief symptom: severe fatigue. "I could barely walk up the stairs," he said.

"This is not a mild illness, and people should try to avoid it."

Petersen mentioned that some patients

with West Nile virus can develop a severe neurological disease that can be fatal.

There is no effective treatment for the virus. In more serious cases, the **CDC** recommends that patients be hospitalized so they can receive supportive care with intravenous fluids.

Researchers are working to develop a vaccine, but Petersen notes that it will be years before it is available to humans.

The best way to stop the spread of West Nile virus is through prevention, he said.

"Wear mosquito repellent, especially around dawn and dusk, which are peak mosquito biting times," Petersen suggests.

He says bug sprays that contain concentrations of the chemical DEET up to 50 percent work the best. Be sure to read the label or check with a doctor regarding the acceptable concentrations for children.

Spraying repellent that contains permethrin on clothing is another option. Experts caution not to put the chemical directly on exposed skin.

Petersen added that a natural product such as oil of lemon eucalyptus CQ may also be effective. The CDC says vitamin B and ultrasonic devices do not work in preventing mosquito bites.

Another way to reduce the risk of getting bitten by a mosquito is to get rid of standing bodies of water around the house, Petersen said.

"The mosquitoes that spread West Nile virus often breed around people's homes in small containers like flower pots, rain barrels and bird baths," he explained.

Even by taking precautions, Petersen concluded, the disease won't be eradicated in the U.S. anytime soon. "I think West Nile virus is here to stay, and I can't tell you how many cases will occur this summer, but there will be epidemics."

## CLARKE CLARIFIES DEMONSTRATION INTENT

Submitted by Ben Russell

The following was placed on our website at the request of Jim McNelly from Clarke Mosquito Control Products Inc.

"Recently, Clarke presented a series of bottle bioassay demonstrations at the Harrisburg Farm Show Complex for the PADEP. The intent of these demonstrations was to highlight the fact that resistance management is achievable within the scope of an Integrated Mosquito Management Program. Following our training, a question was fielded asking if Bti was at risk for resistance. Clarke wishes to reiterate there is no known evidence of resistance to any active ingredient, including Bti, in the state of Pennsylvania."

Editors Note: Jim is the Director of Environmental Services for Clarke Mosquito Control. If you have any questions or concerns regarding CLARKE MOSQUITO CONTROL product effectiveness or environmental impacts, contact Jim by calling 1-800-323-5727, ext 3229 or by email: [jimmcnelly@clarkemosquito.com](mailto:jimmcnelly@clarkemosquito.com).



# PVCA ACADEMIC AWARD

Submitted by Jan Humphreys

Our annual meeting is not too far distant so it is time to start thinking about students to nominate for this award. Please consider students (undergrad or grad) who are working in an area related to vectors/vector control. Perhaps you have a student intern working in your lab—consider nominating her/him. Nominations are due to me by September 15, 2008. The following is a summary of the motion passed at the 1998 Annual Meeting:

## PVCA Academic Award for Student Research in Vector Control

At least two organizations/societies in Pennsylvania recognize with an annual award the efforts of outstanding students in biology and entomology. The Commonwealth of Pennsylvania University Biologists and The Entomological Society of Pennsylvania both have yearly recognition awards for the outstanding student in Biology or Entomology from the state of Pennsylvania. Students are nominated by members of the respective societies, an awards committee uses established criteria to evaluate the nominees, and the outstanding student for the year is chosen by the committee. The student is notified by the committee and the award is presented at the annual

meeting of the society. The student attends the meeting and presents a summary of his/her research to the body of the society during the meeting. Travel, room, and meal expenses for the student are offset by the society. A certificate of recognition and a cash award of \$200 are presented to the student during a banquet.

There exist at the colleges, universities and governmental agencies throughout Pennsylvania graduate and undergraduate students who excel in research projects dealing with vector control or vector control related studies. Their results are often incorporated into industrial, governmental, and private programs. Generally the works of these students go unrecognized except perhaps at the local level—university department and school awards, county/city recognition, local service groups, etc.

We propose that beginning in 1998 The Pennsylvania Vector Control Association establish an award for the outstanding Pennsylvania student conducting research in vector control or vector control related areas during the previous/current year. A student may be nominated by any member of PVCA. A summer mailing to all PVCA members will solicit

nominations. Nominations will be due to the awards committee chair by August 31 each year. The awards committee will review the nominations and by majority vote select the outstanding student. By September 15 the president of PVCA will notify the student and invite him/her to the annual meeting. The student will be required to be in attendance the initial day of the meeting and give a presentation of research at the meeting. The student will be recognized at the evening banquet and awarded a certificate of recognition and \$300. PVCA will cover travel, room for one night, and meals for the student.

The PVCA Awards Committee will consist of five members appointed by the PVCA Executive Committee. Length of service on the Awards Committee will be three years with opportunity for reappointment.

This is our opportunity to recognize the work of some truly outstanding students.

## SMILE?

Summer's over, the kids are in school and I'm stuck here watching you all day.

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# NOMINATION FORM FOR PENNSYLVANIA VECTOR CONTROL ASSOCIATION STUDENT RESEARCH AWARD

## GENERAL INFORMATION

NAME OF NOMINEE \_\_\_\_\_

ADDRESS \_\_\_\_\_  
\_\_\_\_\_

E-Mail \_\_\_\_\_ PH: \_\_\_\_\_

## EDUCATIONAL BACKGROUND

INSTITUTION \_\_\_\_\_

MAJOR \_\_\_\_\_ UNDERGRAD GRAD

GRADE PT. AVERAGE \_\_\_\_\_

SPECIAL HONORS, AWARDS, ETC.

Please describe your nominee's research contribution(s) to the area  
of vector control. What is the significance of this research?

PVCA MEMBER'S NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_  
\_\_\_\_\_

PHONE NUMBER \_\_\_\_\_

Application deadline date: August 31, 2007.

Please return application to: J. G. Humphreys

Department of Biology, Indiana University of Pennsylvania

Indiana, PA 15705 or e-mail me. [jghumfrz@auxmail.iup.edu](mailto:jghumfrz@auxmail.iup.edu)



# White Nose Syndrome: Is Pennsylvania next?

By Joe Kosack, Game Commission

The Game Commission has found itself on a new frontier: it is working with several states and the U.S. Fish and Wildlife Service to sort out what is killing bats in New York and New England.

Although [White-Nose Syndrome](#) has not been found in Pennsylvania - and agency officials hope it stays that way - the state is fast becoming an integral player in regional and national efforts aimed at learning more about this unprecedented threat to bats.

Just mentioning the words White Nose Syndrome to Game Commission biologist Greg Turner brings concern to his face. He knows WNS is just over the border in New York, as well as Connecticut, Massachusetts and Vermont, and recognizes it's not something that Pennsylvania's bat population can endure without negative consequences. In many northeastern hibernacula where it has struck, WNS has decimated wintering bat colonies with mortality that ranges from 80 to 100 percent. Now there are symptoms in Pennsylvania bat hibernacula that have heightened concern among agency bat biologists, as well as the U.S. Fish and Wildlife Service.

"We found fungus on bats' ears and wings - similar to that on bats afflicted with WNS in Vermont and New York - at sites in Fayette, Luzerne and Blair counties," said Turner. "One of the sites, Hartman Mine, at Canoe Creek State Park in Blair County, is the state's largest hibernaculum for Indiana bats, a federally endangered species.

"The good news is no dead bats have been found to date in Pennsylvania, and the bats we cap-

tured in mist nets leaving hibernacula were not grossly underweight, a noticeable condition observed in many bats affected with WNS. But with WNS surfacing only 11 miles away from our New York border, it now seems that it might just be a matter of time. That's why the Game Commission is gearing up to try to identify the progression of WNS and shed further light on how this mysterious disorder kills bats."

"This spring, New York and New England sustained terrible losses," Turner said. "The Fish and Wildlife Service has projected tens of thousands of bats may be lost to WNS in New York and New England in 2008. Should Pennsylvania - with more than 4,000 mines and 1,000 caves - become the next hotbed, we could sustain even larger losses."

WNS was first documented in New York in late 2006. Its discovery occurred during routine surveys counting endangered Indiana bats, a large portion of which had inexplicably disappeared from one hibernaculum. Wildlife officials then noticed a strange white fungus on the muzzle of the bats still remaining - hence the syndrome's name. The problem worsened in 2007 as officials investigated reports of bats flying from hibernacula in mid-winter and in broad daylight, when they were supposed to be hibernating. Some bats bore no sign of disease or sickness, but were underweight and leaving their wintering quarters, which is abnormal. Others had white fungus around their noses and/or on their ears and wings.

All affected states and the USFWS have sent afflicted bats to laboratories throughout the United States. This effort includes several bats from Barton Cave - on Forbes State

Forest in Fayette County - and Hartman Mine, because some white fungus was found on otherwise apparently healthy bats in recent Game Commission fieldwork. But lab-work has yet to shed further light on anything. As Susi von Oettingen, a USFWS endangered species biologist, said recently about WNS, "We have no clue what it is right now and it doesn't look like we're going to find out anytime soon. Nothing like this has been documented in bat populations anywhere else in the world to this extent."

It remains unclear whether the fungus is killing bats, an up-until-now unrecognized byproduct of cave hibernation, or a secondary opportunist attacking already weakened bats. Currently, the best WNS indicators are mass mortality, early emergence from hibernacula and erratic daytime flying.

An associated problem WNS causes in hibernacula occurs when movement by afflicted bats awakens healthy bats hibernating nearby. These repeated disturbances may cause healthy bats to draw from critical fat reserves they need to make it through winter. When a bat awakens from hibernation, its body temperature rises from around 45 degrees, to about 100, burning up considerable fat reserves unnecessarily. Awakened too often, a bat cannot sustain hibernation, and it will starve to death foraging for food on a winter landscape.

Wildlife managers investigating these unusual and desperate eruptions from hibernacula in New York and elsewhere haven't been able to pinpoint what is causing bats to behave so erratically. And now Game Commission bat biologists, regarded as one of the best manage-



# White Nose Syndrome: Is Pennsylvania next?

*(Continued from page 11)*

ment teams in the country, will get their chance to investigate this enigma.

WNS has drawn the U.S. Fish and Wildlife Service's attention. The agency is working closely with the four states where WNS has appeared, as well as Pennsylvania and other New England and Mid-Atlantic states. Although the federal response isn't a red alert, there is great concern, because bats are so gregarious and often state-hop - wintering in one state, summering in another. This lifestyle increases the likelihood of contact with affected bats or sites, as well as the potential for huge losses among our bat populations.

"Our three possible sites will be monitored intensively this fall and next winter to develop baseline data in the event WNS shows up in Pennsylvania," Turner said. "Mostly, we'll band and weigh bats taken in traps at entrances, and then see if they return. Recording weights will help us ascertain whether bats are entering hibernacula ill-prepared to hibernate, or leaving with a health problem they contracted while wintering. We also will focus on examining their hibernating patterns and conditions with Dr. DeeAnn Reeder, a bat physiologist at Bucknell University."

Theories abound about what's happening to the Northeast's cave bats. Although wildlife managers attribute the chronicled behavior and mass mortality to WNS, they can't positively identify what causes it. It could be the fungus, or the fungus could be a symptom. It may be a pathogen. If it is, where did it come from, why is it spreading so rapidly, and why

haven't American cave bats been through this before? Or have they? So much remains unclear, including how to rank the threat this deadly enigma poses to bats in the Northeast, or the tens of thousands of federally-endangered Virginia big-eared bats and gray bats in the huge limestone caves south of the Mason Dixon Line.

What is clear is Pennsylvania's newfound role in this unfolding conservation drama.

"Pennsylvania appears to be directly in the path of where WNS is heading next, so the Fish and Wildlife Service will be looking to the Game Commission to try to uncover the early warning signs that we didn't have a chance to look for in New York, Vermont and Massachusetts," explained von Oettingen. "We're optimistic the Game Commission can assist us in learning how other states can prepare to deal with WNS."

Of course, von Oettingen, also is hoping for the best. "My hope is that white-nose syndrome stops in New York and New England," she said. "If it doesn't stop, I don't even want to think about it, because we could lose more Indiana bats and it could be an unmitigated disaster for small-footed bats."

The Game Commission will have a chance to shed light on WNS as soon as this summer when bats head to Pennsylvania maternity roosts, such as Canoe Creek Church and "bat condos" on State Game Lands. "There's no doubt some New York bats summer in Pennsylvania, and there's a possibility they could influence the health of some maternity colonies," von Oettingen said. "So it will be important for Game Commission biologists to monitor

the population and health of their colonies."

The USFWS plans to continue facilitating and coordinating the regional response to WNS, and is looking for sources of additional funding to help states sort out what's happening within their borders. It also will continue to analyze suspect bats at its laboratories and coordinate to have other leading laboratories assist in this effort.

In Pennsylvania, Turner said the Game Commission will focus on summer maternity roosts and prepare for monitoring bats heading into hibernacula in the fall. He also noted Northeastern bat biologists will meet in June to establish priorities for collecting data at hibernacula this fall and winter, and brainstorm for funding to help defray the cost of additional fieldwork. Without supplemental funding or manpower assistance from other states, however, there will be a limit to how much fieldwork the Game Commission can accomplish on this important front.

Bats are a tremendous asset to wildlife communities, and humans. Collectively, they eat insects by the tons and spare Pennsylvanians from myriad backyard flying pest and crop-damage issues. Unfortunately, people know more about elephants than they do bats. So misinformation about bats often overshadows the good they do and their importance in Pennsylvania's biodiversity.

Visit the Game Commission website for [more information on bats](#).

**Joe Kosack** is a Wildlife Conservation Education Specialist with the Game Commission.



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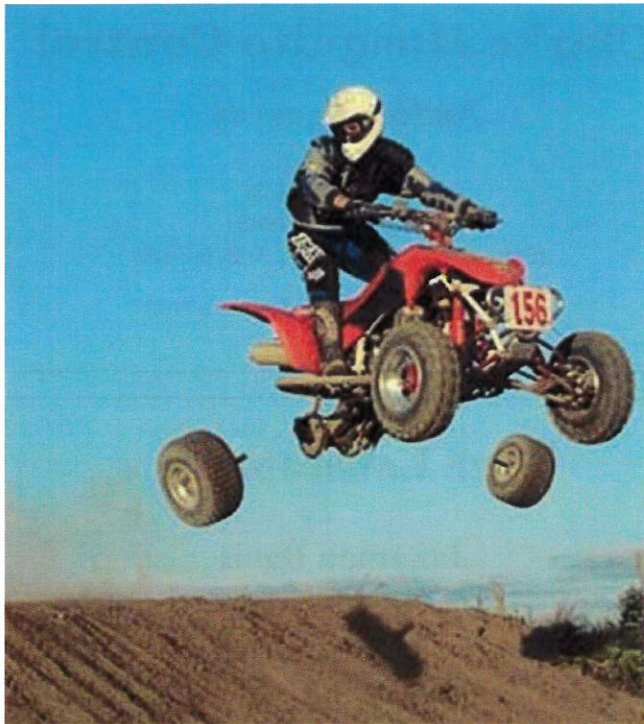
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# SOMETHING TO THINK ABOUT:



## Think this qualify as a "DAH" moment?

This is quite the picture, isn't it. I'm wondering just what he's thinking. Could he be asking himself if he should have double-checked those bolts after working on the tranny? Maybe he's thinking three beers for breakfast wasn't such a good idea? Who knows? But in about 5 seconds, he will find out just what he's made of.

It's always a good idea to double check your equipment; especially after having maintenance done on it. Check for loose bolts, fittings, connectors and hoses. I know; you're saying, "our ATV doesn't get used like that". I would hope not. Still, roll-overs, spills and accidents do happen. Just something to think about.

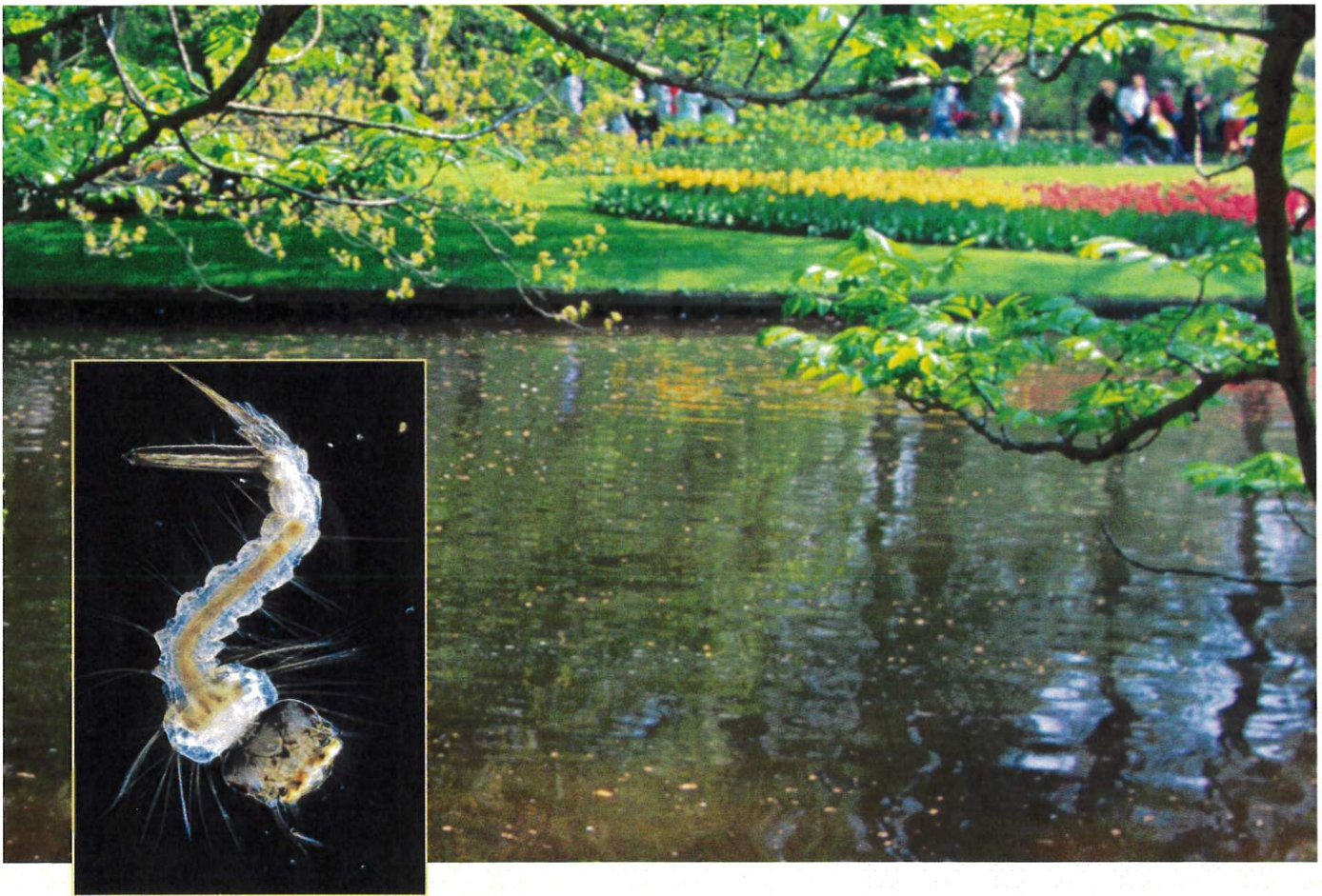
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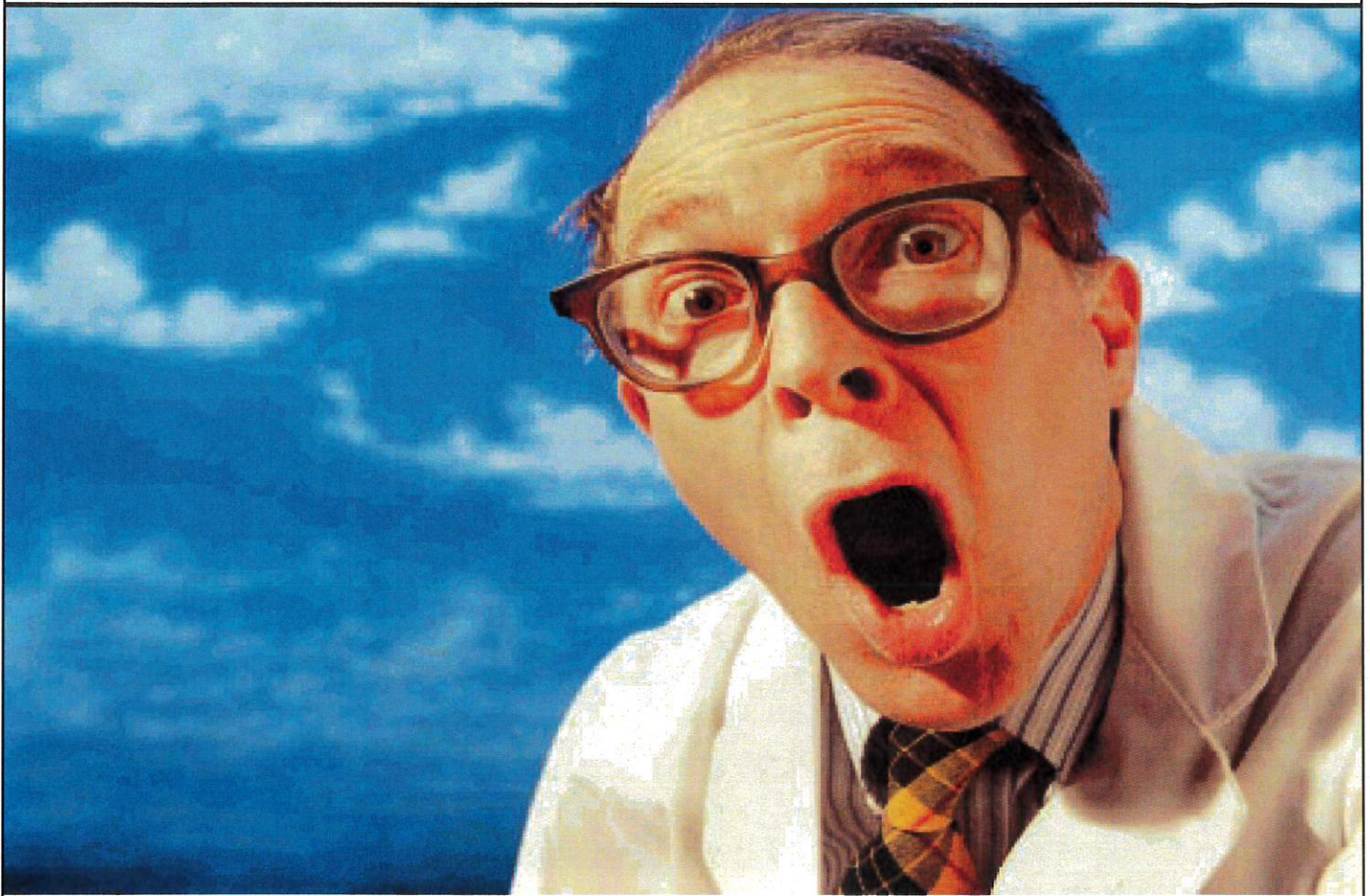
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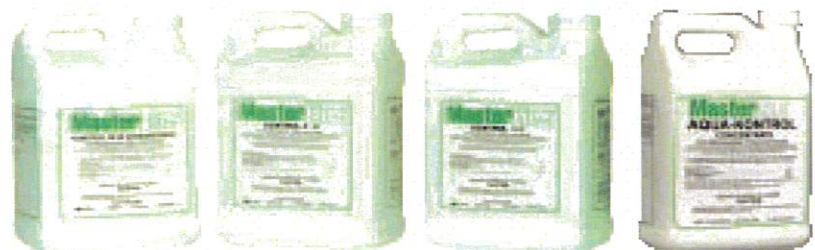




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The Pennsylvania Vector is an informational news letter, written and produced for the purpose of providing the members of the PVCA with updates on activities conducted by this group and to highlight innovations made in the field of vector control. 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 re-scheduled (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**

Mike Hutchinson



I hope all of you had a great summer chasing mosquitoes, ticks, black flies, rodents and other creatures! When you all get a chance to wind down, you can start thinking about attending this year's annual conference to be held at the Ramada in State College November 19-21.

The program committee has been working hard to bring you another informative and entertaining meeting that you should enjoy. A few of the topics that are tentatively scheduled include dog heartworm and it's mosquito vectors, Hantavirus in PA, emerald ash borer surveillance in PA, mosquito repellents, black fly and WNV program updates for PA, and much more.

I hope to see you in November!

Mike

[mhutchinso@state.pa.us](mailto:mhutchinso@state.pa.us)

717-346-8265

**EDITOR'S Corner**

Greg Molter



Since 2000 we have been dealing with West Nile virus as a 3 phase program: Education, Surveillance and Control. As part of each phase, we have tried to be proactive in the application of our trade.

Of the 3 phases mentioned, my personal choice for most important has to be education. Without a proper flow of information, how is the average resident to know about WNV, self protection measures, the possible risk associated with infection, mosquito habitat reduction and so much more?

We're doing a pretty good job all across the state. We've addressed public meetings and given briefings to municipal officials. We've talked with civic organizations. We've even taken our slide shows, power points, and brochures to the schools. But our most important allies in this battle to distribute information has to be the media.

Some handle this part of the job well; it's become a daily operation and has been for years. For others, it may take some time to feel comfortable. Know your job, stick to the facts and willingly invite the media to be an information partner. You might possibly become a celebrity thanks to the media. The question will be, are you seen as a professional or a goofball?