



# FIGHT THE BITE

## VECTOR MANAGEMENT NEWS

VOL. 3, ISSUE 1

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**Vector Management's** purpose is the surveillance and control of biting arthropods within the Commonwealth that can cause human illness and pestilence. This is accomplished through Integrated Vector Management.

**Integrated Vector Management** incorporates educating the public, arthropod surveillance, and preventative practices coupled with physical, biological, and chemical control applications.



## SEASONAL FLOODING CAN CAUSE MAJOR MOSQUITO ISSUES

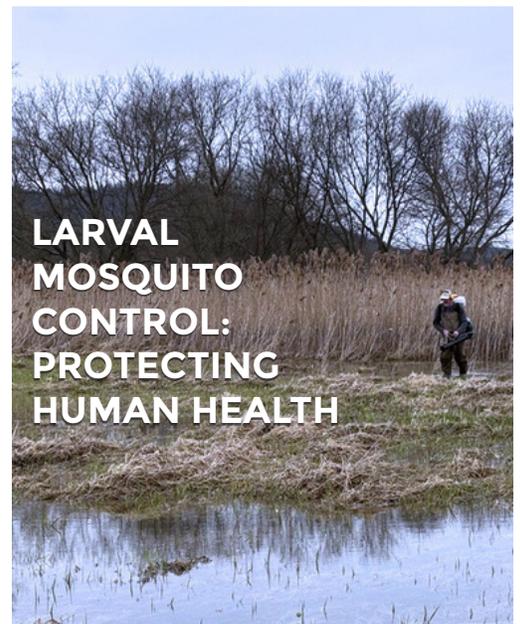
Did you know that some mosquito species lay eggs above the water line? When large seasonal rain events occur, flooding hydrates those dry eggs which brings them to life and triggers their life cycle. It's important to treat the larvae of these floodwater species with *Bacillus thuringiensis israelensis* (Bti) to prevent the mosquitoes from becoming adults. Photo on right: DEP Aquatic Biologist Dave Hurley treating floodwaters with Bti.



Pennsylvania  
Department of  
Environmental Protection

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To learn about our initiatives that promote ecofriendly arthropod management practices such as public education, surveillance, and prevention and control, please visit our website. See how these initiatives help reduce vector-borne disease in Pennsylvania.





# Tick Surveillance and Testing Program

[dep.pa.gov/ticks](http://dep.pa.gov/ticks)

## LONGHORNED TICK: EXPANSION AND GROWTH

BY: JENNA NOBLE, AQUATIC BIOLOGIST II

In 2017, *Haemaphysalis longicornis*, also known as the Longhorned tick, was officially documented in the U.S. in New Jersey. Shortly thereafter in 2019, this tick was collected during routine DEP tick surveillance in Bucks County. Since this first encounter, it has been found in 29 additional counties. Figure 1 shows the expansion to other counties throughout the state. During this time, their population has been steadily increasing.

## LONGHORNED TICK: THEILERIA RESPONSE

BY: CHRISTIAN BOYER, AQUATIC BIOLOGIST SUPERVISOR

The Tick Surveillance and Testing Program responded to reports of *Theileria orientalis Ikeda* infections in three different cattle herds in Pennsylvania. *Theileria* is a blood-borne protozoan that is transmitted by the newly invasive Longhorned tick, which attacks red blood cells, causing anemia, still births, altered milk production, and sometimes death in cattle.

DEP Tick Surveillance and Testing Program biologists surveyed farms in Perry, Bedford, and Washington Counties (Figure 2) for Longhorned ticks. Staff collected 0, 2, and 56 Longhorned ticks from each farm, respectively. All ticks were identified by the Vector Management Laboratory and sent to the PA Department of Agriculture (PDA) for testing. At minimum, 14 of the ticks tested positive for *Theileria* for an infection rate of 24%. This is the highest infection rate found nationally from field-collected specimens. Additionally, a partially blood-fed tick was collected during field surveillance in Washington County. PDA found that the tick was positive for *Theileria* and determined that it contained bovine blood. This is the first time there has been a confirmed, direct link between cattle feeding and *Theileria* infection from field-collected Longhorned ticks.

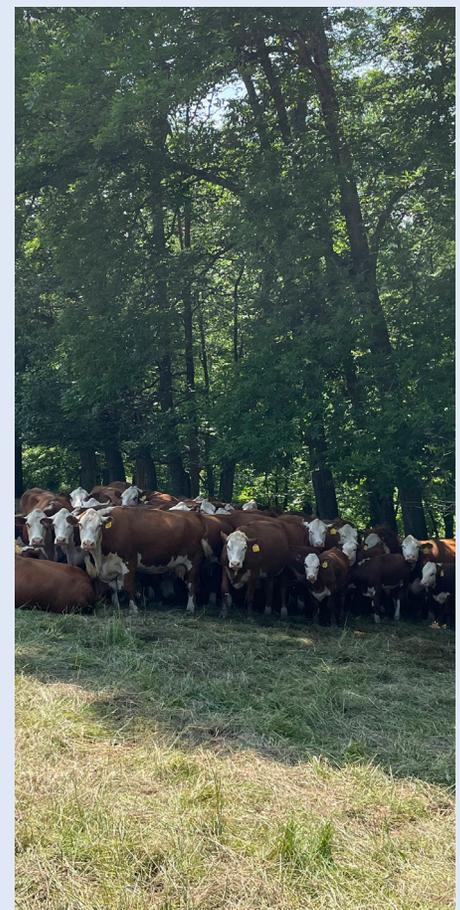
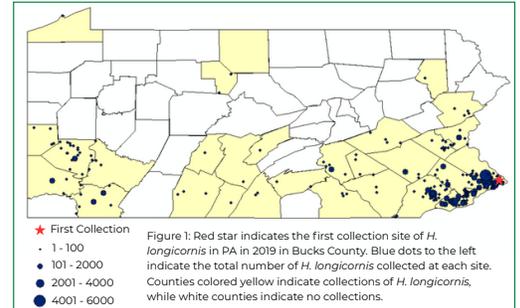


Figure 2. Cow herd from the Washington County farm where *Theileria orientalis Ikeda* positive *H. longicornis* were collected.



## MOSQUITO-BORNE DISEASE CONTROL PROGRAM

### PENNSYLVANIA AND THE NORTHEAST REGIONAL CENTER FOR EXCELLENCE IN VECTOR-BORNE DISEASE

BY: BRYAN DIEHL, AQUATIC BIOLOGIST II

Led by the Cornell University Department of Entomology, the Northeast Regional Center for Excellence (NEVBD) was founded in 2017 by the Centers for Disease Control and Prevention (CDC) as one of five nationwide Centers of Excellence in Vector-Borne Diseases. Covering thirteen states and the District of Columbia, the NEVBD describes itself as a "... network of researchers, public health experts, and vector-borne disease professionals (that) collaborate on evaluation & research projects, professional training programs, and the sharing and creation of resources on mosquitoes, ticks, and the diseases they carry in our region."

As part of our participation in the NEVBD from June through October each year, the Pennsylvania Department of Environmental Protection - Division of Vector Management (VM) participates in weekly Arbovirus Situational Awareness Calls where representatives from member states and locales network, collaborate, and share data related to mosquito-borne and tick-borne disease surveillance and control efforts in their respective jurisdictions. The interaction has been invaluable and has led to Pennsylvania's decision to test mosquito samples for emerging diseases like Jamestown Canyon Virus (JCV). Additionally, VM uses the collaboration to assist with tracking the spread of diseases, like Eastern Equine Encephalitis (EEE), in neighboring states to help prepare and evaluate the risk of transmission in Pennsylvania.

### MOSQUITO-BORNE DISEASE CONTROL PROGRAM PROVIDES STATEWIDE COVERAGE

BY: MADDIE METZGER, AQUATIC BIOLOGIST II

The Department and its county partners provide adult mosquito surveillance in all 67 Pennsylvania counties (Figure 3). In 2025, all counties except Clarion County had mosquitoes test positive for West Nile Virus. These efforts serviced approximately 72% of the total Pennsylvania population. The map to the right depicts the adult mosquito surveillance effort and West Nile Virus activity by municipality throughout the 2025 season.

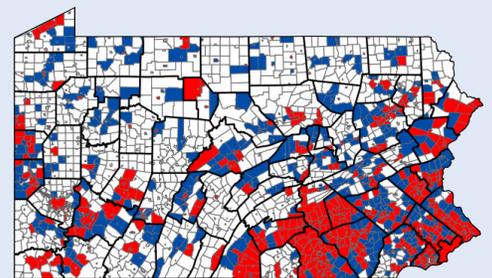


Figure 3. Red municipalities had West Nile Virus activity in mosquito populations.

**Blue** municipalities were surveyed but did not have virus activity detected through our efforts.

**White** municipalities did not have adult surveillance.



## BLACK FLY SUPPRESSION PROGRAM

[dep.pa.gov/blackfly](http://dep.pa.gov/blackfly)

### STREAM HIGHLIGHT: NESHANNOCK CREEK

BY: JOHN LOWIN, AQUATIC BIOLOGIST II

The Black Fly Suppression Program, now in its 40th year of operation, actively monitors and treats 45 different waterways in over 1,800 miles in the Commonwealth. One of the more popular streams for tourism and recreation in the Southwest part of the state is Neshannock Creek, located in Lawrence County (Figure 4).

Neshannock Creek's name originates from the Lenape (Delaware) Native American tribe and means "place of two rivers." Centuries before European settlement, the Lenape hunted, fished, and maintained camps along the creek.

Neshannock Creek flows through roughly 25 miles of forest and farmland in both Mercer and Lawrence counties before emptying into the Shenango River near New Castle, Lawrence County. Neshannock Creek also flows through Volant (Figure 5), a unique village of quaint shops that is popular for tourists and visitors in the area who come to this scenic area of Lawrence County where the second largest Old Order Amish community of 2,300 residents live and work. There are ample opportunities to purchase produce, handcrafted furniture, and decorations directly from Amish farm stands and shops in the countryside surrounding Volant and the nearby town of New Wilmington.

Neshannock Creek is also known for its water quality and prolific insect hatches, making it a top fly-fishing destination in this part of the state (Figure 6). The nearly three-mile-long delayed harvest section, stretching from the mill dam in Volant downstream to a covered bridge, is only one of the 21 streams in the state designated as Keystone Select Waters. This designation is given to streams that are stocked with trophy-sized trout by the PA Fish and Boat Commission to attract more anglers. Fishermen in late spring can experience large hatches of Blue-winged olive mayflies and Grannom caddisflies, which makes it a special place for fly anglers.

The Black Fly Suppression Program operates within a 16-mile section of Neshannock Creek, which starts at the village of Volant and continues downstream. Lawrence County's participation in DEP's Black Fly Suppression Program not only provides a service to its residents but also helps to provide a positive experience for tourism and recreation that contributes to the local economy.



Figure 4. The Mill Dam on Neshannock Creek in Volant, Lawrence County.



Figure 5. Volant Mills tourist parking area with access to Neshannock Creek, Orvis fly shop, and antique shop, Lawrence County.



Figure 6. Fly fisherman on "the stretch" in Volant behind the Orvis fly shop on Neshannock Creek, Lawrence County.



## BLACK FLY SUPPRESSION PROGRAM

[dep.pa.gov/blackfly](http://dep.pa.gov/blackfly)

### LIMITED-TERM, UNLIMITED EXPERIENCE

BY: SOPHIA PARLATI, AQUATIC BIOLOGIST I

During my time as a limited-term biologist in the Black Fly Suppression Program, I was able to travel around Pennsylvania, working alongside DEP biologists in the Northcentral, Southcentral, and Southeast regions. I navigated the Juniata and Susquehanna Rivers by boat (Figure 7) and kayak and saw firsthand, from the air, how helicopters conducted aerial operations on the Juniata River. Each week brought new challenges and unique perspectives on the state's waterways. I was involved in pre- and post-treatment sampling, treated sites by hand along the Yellow Breeches and Lycoming Creeks (Figure 8), and learned to take flow measurements during low-flow events with a flow meter. Additionally, I helped collect macroinvertebrates for non-target biological surveys on treated waterways, sorted macroinvertebrates at the Bureau of Labs for identification, and even assisted with tick surveillance and testing for vector-borne diseases. In just six months, I have gained a thorough understanding of the wide variety of work that DEP's Division of Vector Management conducts to serve the citizens of the Commonwealth.

Reflecting on this experience, I am really grateful for how much I have learned in such a short period. The Black Fly Suppression Program struck a great balance between fieldwork and lab analysis, highlighting how crucial adaptability and organization are in an environmental career. Each day was different, and that variety reinforced the importance of remaining flexible, detail-oriented, and engaged with the broader mission of protecting not just Pennsylvania's natural resources, but also public health.

*Sophia Parlati is a Temporary Biologist in the Black Fly Suppression Program headquartered at the DEP Lab in Harrisburg. Sophia recently graduated in May 2025 from Juniata College with an M.S. in Natural Resource Management, where she studied plankton communities in Raystown Lake. Sophia's term ended on November 14th.*



Figure 7. Left: Sophia Parlati with DEP biologist Nick Selvage sampling the Susquehanna River for black flies.



Figure 8. Black Fly Suppression Program limited-term biologist Sophia Parlati treating Lycoming Creek, Lycoming County with Bti.



## TAXONOMY LABORATORY

### MACROINVERTEBRATES: CRUCIAL BIOLOGICAL INDICATORS

BY: RICHARD DIETSCH,  
AQUATIC BIOLOGIST II, TAXONOMY LAB

Aquatic macroinvertebrates play a crucial role in stream food webs and nutrient cycling and also function as bioindicators of water quality. Each species possesses a unique tolerance for pollutants, temperature, and chemicals. For this reason, staff in the Bureau of Clean Water collect these insects from streams across the Commonwealth using standard protocols. Collected material is transported to the Bureau of Laboratories, where Vector Management Laboratory staff help process from November through March, working around peak vector season. Approximately 200 organisms from each collection are isolated for identification to the genus level using stereo and compound microscopes (Figure 9). The presence, diversity, and abundance of the various macroinvertebrates encountered during identifications are factored into a seasonal index of biotic integrity, with the final calculation producing a score between 0 and 100 for the stream site. The score is used to categorize streams as Exceptional Value (the highest tier of protection), High-Quality, Cold-Water Fishery, or Warm-Water Fishery. These designations impact permitting and dictate regulatory standards for environmental protection.

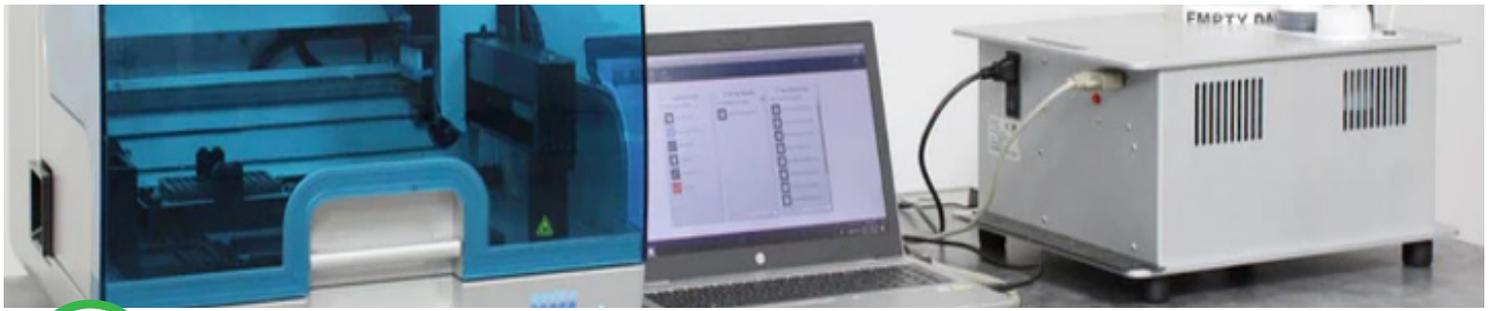
Over the last five years, Vector Management Laboratory staff have processed an average of 155 samples per season for the Bureau of Clean Water. Challenging specimens, like non-biting midge larvae (Chironomidae), require permanent clearing and mounting on microscope slides to enable species identification using minute head capsule parts (Figure 10). An additional 306 chironomid slides have been processed by Vector Management Laboratory staff to generate high-resolution identifications.



Figure 9. *Brachycentrus appalachia*, a species of caddisfly (lower) with 'log-cabin' case (upper) made using silk and pieces of plant material for protection. Photo credit: Ben Paul, DEP Vector Management.



Figure 10. Image of head capsule of *Brillia parva* chironomid larvae taken using a compound fluorescence motorized microscope. Specimen found in sample collected from Knob Run on 02-25-21, Adams County, PA. Photo Credit: Richard Dietsch.



## MOLECULAR LABORATORY

### A MOLECULAR FOUR PART HARMONY

BY: BRYN COSKLO, MICROBIOLOGIST II

The Vector Management Molecular Laboratory has initiated development of a quadplex PCR protocol aimed at improving the efficiency and capacity of tick-borne disease testing. This quadplex will combine molecular testing of four pathogens: *Borrelia burgdorferi* (Lyme disease), *Anaplasma phagocytophilum* (Anaplasmosis), *Babesia microti* (Babesiosis), and *Borrelia miyamotoi* (Hard Tick Relapsing Fever), commonly carried by *Ixodes scapularis* (deer tick).

Currently, the laboratory's protocol requires each pathogen to be tested individually (Figure 11). This process consumes valuable templates, reagents, equipment, and personnel time, ultimately taxing throughput. Due to these constraints, other essential surveillance testing, such as West Nile Virus in *Culex* mosquitoes, cannot be performed simultaneously, as it confuses logistics. By transitioning to a multiplex protocol, the lab aims to limit these bottlenecks and streamline disease monitoring across multiple vectors.

The quadplex PCR will also reduce consumable waste such as plasticware, which aligns with both cost-saving goals and sustainable laboratory practices. It enhances Pennsylvania's ability to respond to vector-borne disease threats in a timely, ecologically sound, and effective manner.

### FROM THE COUNTY CHESTER COUNTY STAFF ARE FIGHTING THE BITE

BY: ANDY HEYDT, CHESTER COUNTY

I want to take this opportunity to thank my team of Environmental Health Specialists (EHS): Chloe Feeny, Jarred Hayes (Figure 12), Max Weiser, and Ben Burgunder (Figure 13). The team did a great job this season and effectively balanced our mosquito/tick work with our other duties. In the moment, it seems like a lot (because it is), but the team really powered through the 2025 season and absolutely CRUSHED IT.

During the 2025 season, the team performed a record number of larval treatments for Chester County. This was even at a slight disadvantage, as we started the season down an EHS. Once we were fully staffed again in July, we really started cooking. We also logged quite a few outreach events, including presentations at West Chester University and East Vincent Twp's Environmental Advisory Committee, a table at a Chesco Parks Preservation event, routine municipal updates on trap collection and testing, and numerous social media posts.

We did have a low point in the season when we realized that two of our problem areas, Black Rock Sanctuary and Frick's Lock Silt Basins, had reared their ugly heads. However, we rallied the troops to do some mid-season larvicide and a sizeable barrier spray in response. We even got to break out our new battery-powered Birchmeier sprayer for some localized adult control. To my team, I can't express how great a job you all did to protect public health in Chester County in 2025. I look forward to 2026 and another great season of fighting the bite.

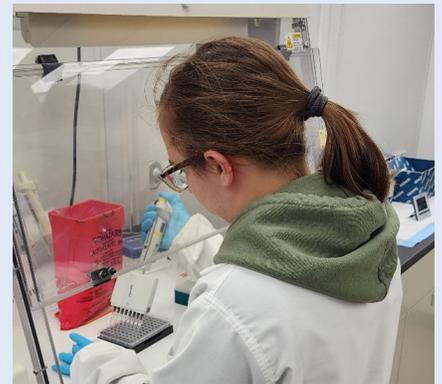


Figure 11. Bryn Cosklo preparing samples for pathogen testing.



Figure 12. Jarred Hayes performing a barrier treatment for adult mosquitoes.

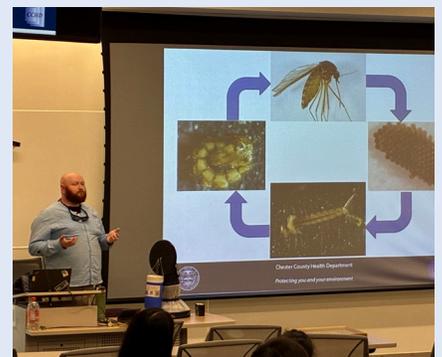


Figure 13. Ben Burgunder speaking about public health careers.



## FROM THE COUNTY

### WEST NILE VIRUS IN CAMBRIA COUNTY

BY: MARY VIBOSTOK, CAMBRIA COUNTY

As the Coordinator of the Mosquito-borne Disease Control Program in Cambria County, I have been responsible for the daunting task of controlling mosquito populations and conducting surveillance to detect the presence of West Nile Virus (Figure 14). It is a challenging and necessary job because West Nile can cause havoc in the human body for those unfortunate enough to contract the virus. We have statistics which convey how many people have been infected with West Nile, but I fear we do not realize the impact such infections have on patients and their families.

Recently, I became aware of a man suffering from the effects of the virus. A once physically active man, he has been constrained by many traumatic and debilitating conditions that have reduced him to needing assistance in many aspects of his life.

In my dealings with this person and family, I responded with heartbreak when I realized the depth and breadth of their suffering. To receive the care this patient required, the family had to move many miles away from the little borough they have called home for over 50 years. This impacted not only the family, but also the larger community, which was upset and saddened by this necessary move. It is a reminder of how important our work is. Limiting this virus's viability and spread will provide the means to avoid the anguish and suffering that so often accompany this virus's effects. And that, I believe, is the most critical of necessities. For when we accomplish that, we have remembered that it is not a statistic or a number that needs to be lowered, but a human being who needs care and compassion. There is no better service we can provide.

### EDUCATING THE NEXT GENERATION OF ENTOMOLOGISTS

BY: LAUREN HOLDER, LUZERNE CONSERVATION DISTRICT

The Luzerne Conservation District attended a session of the public library's summer reading program, "The World of Bugs," on July 29, 2025. Staff spoke to approximately 60 kids and their families at the Hoyt Library about mosquitoes and ticks and how to protect themselves from both (Figure 15). Staff brought in live mosquitoes in a mosquito cage so kids could safely see and hear them up close. Kids enjoyed smelling the gross "stink water" and lures (used to entice mosquitoes). Staff caught mosquito larvae ahead of time and placed them in containers in the courtyard to give kids the opportunity to "play scientist" and catch larvae in a dipper and pipette them into a collection bottle. Not only did this provide a hands-on opportunity, but it also familiarized kids with the appearance and movement of mosquito larvae so they can be on the lookout for them around their homes.

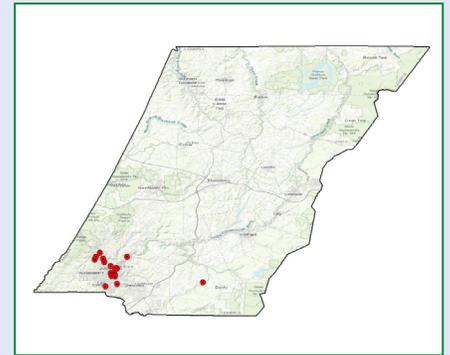


Figure 14. Cambria County with West Nile positive mosquito sites denoted with red dots. Cambria County had a total of 39 positive mosquito pools in 2025.



Figure 15. Luzerne Conservation District's Lauren Holder does outreach and education throughout the year to teach kids and adults alike to protect themselves from vector-borne disease.



## FROM THE COUNTY

### THE COUNTRY MOSQUITO AND THE CITY MOSQUITO

BY: JOLIE COATES, BRADFORD AND TIOGA COUNTY

For three years, I had grown accustomed to working in the 4th largest city in Pennsylvania- Reading (Figure 16). There are specifics about conducting mosquito surveillance in Reading, such as working with public works and code enforcement crews, a 71-acre STP, and some very interesting complaint calls. Reading City was full of *Aedes albopictus* (Tiger mosquito) with mosquito traps containing multitudes. West Nile Virus (WNV) positive mosquito samples would begin to roll in come late June and continue through September, resulting in ULV truck treatments- sometimes multiple in the same week. It was not uncommon to receive well over 100 WNV positive mosquito samples each season. Late night treatments in Reading City made for some good stories the next day. When notified of a WNV positive mosquito sample, the municipal officials were just a quick phone call or email away. The trapping sites were close together, and it was a rarity when I would drive more than a half hour to get from site to site. If I happened to forget something, a trap broke, or a battery died, it was a quick drive back to the office to remedy the situation.

Then, I moved back to my home in Bradford County. This program consists of both Bradford and Tioga Counties- two very rural counties in the north central part of the state (Figure 17). At first, I was determined to find the county's first *Aedes albopictus* (Tiger mosquito) sample, but instead was greeted with traps consisting primarily of *Aedes japonicus* (Rock Pool mosquito). I am still on the lookout for the elusive northern Pennsylvanian Tiger mosquito. I received the first WNV positive email in August and all in all, received eight more of them in the next two months. Most of these rural municipalities don't employ a public works department nor code enforcement officers. Many staff don't even have emails. When I do have to make contact, I need to do so from my office because I rarely have enough cell service for a call to go through when I'm in the field. The drive to purchase dry ice is a mere hour away, and gravid sites can be up to two hours away. I have learned to double and triple-check that all of my equipment (and more!) is always in the truck.

What I have learned over the last few years is that the mosquito programs throughout Pennsylvania are not all created equal. In theory, we are all out doing the same fieldwork- setting the same traps, calling into the same biweekly calls, and double-checking for ticks after collecting. But the rural and urban programs are operated differently - I won't be walking around the Pennsylvania Grand Canyon with code enforcement, nor will those in Reading be educating farmers about mosquito breeding in manure lagoons. The programs need to fit the people (and mosquitoes) around it, and that's what I spent my 2025 mosquito season doing - fitting the newly minted Bradford/Tioga coalition to the community around it.



Figure 16. Jolie Coates, performing mosquito control at a mosquito surveillance site. This site in Reading City would produce mosquitoes that tested positive for WNV each year.

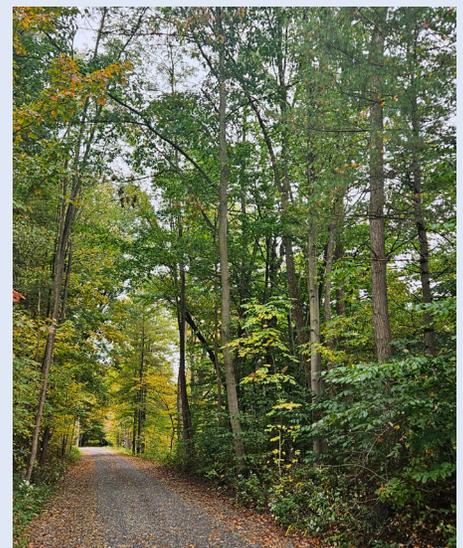


Figure 17. A sewer treatment plant (STP) mosquito surveillance site just outside of Blossburg, PA in Tioga County.



## FROM THE COUNTY

### MOSQUITOES OUT OF THIN AIR

BY: JASON GOETZ, FRANKLIN COUNTY

Can mosquitoes just develop out of thin air? No, of course not, but sometimes it seems that way. There are moments where adult mosquito numbers indicate an obvious larval source in the immediate area, but discovering the source itself is not always apparent. When the area is vacant of flood water, retention ponds, retention basins, and other clear larval sources, yet a large number of adults are being found, it leaves you scratching your head. What is worse is when you have this large number of adult mosquitoes with no clear larval source, and you also have dry conditions.

Imagine this scenario: it is late August, and it has not rained for a month. The mosquito issues you were having back in June and July are all cinched up, and mosquito numbers across the county are very low, all except one area. You have searched and searched for a breeding spot and have found nothing. Each week you come back hoping it's a fluke, but the mosquito numbers begin to rise. It's evident there is a large breeding source, but where?

Franklin County has a very popular park where this very scenario took place. Before the park was built in 1998, it was an active dairy farm, and it also had a small stream running through the land called "English Valley Run." On a wet year, the stream would overflow its banks, causing massive flooding and temporary wetlands. In the 1990's after an intense drought, the stream disappeared and never recovered to what it once was. Throughout the park property the stream bed is dry, but it then reappears at the park's boundary under a bridge. This area where it reappears is stagnant and unpleasant, but it is permanent and has aquatic life present. Since 2019, this spot has been routinely surveyed for mosquito larvae, and not one has been found.

That was until this year, when high numbers of adult mosquitoes were collected at the park in late summer. This prompted an investigation of the area. Wooded areas adjacent to the park were checked with zero breeding habitat found. I had dismissed where the stream reemerged under the bridge because it had been checked for five years with nothing collected. After several weeks of high numbers, I finally decided to check under the bridge just in case. What I found was astonishing- mosquito larvae so thick they made a wake in the water (Figure 18). BTI was promptly used to extinguish the larvae. Upon further investigation, I found just on the other side of the bridge sediment had built up causing a dam and choking off the surface water under the bridge from the rest of the stream (Figure 19). Essentially, it created its own little pool separate from the creek. Just following the creek down another 30 yards or so, I could see black nose dace, chubs, and suckers, signaling a permanent creek. I took larval samples in that section and found nothing. It just goes to show you there is no harm in rechecking and reevaluating larval sources, even if you have never found one there when checked for half a decade.

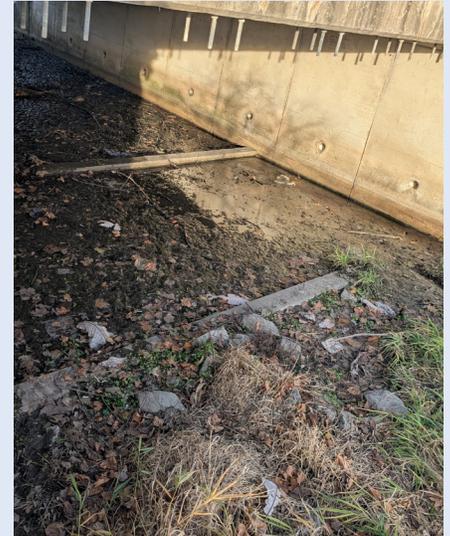


Figure 18. This standing stagnant water under the bridge at a community park that had historically not produced mosquitoes.

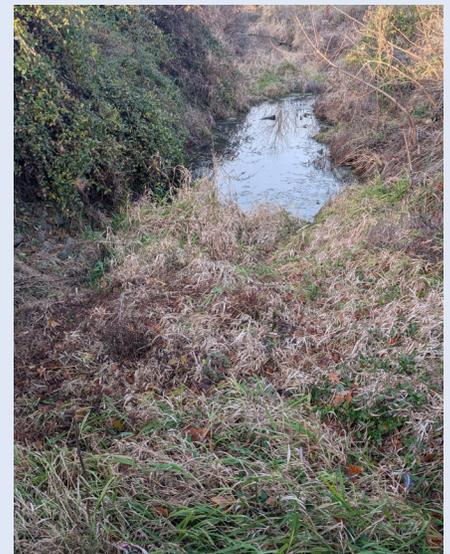


Figure 19. Area where sediment had built up preventing the water from flowing. This permanent water was actively breeding mosquitoes.



## STAFF HIGHLIGHTS

### JENNA NOBLE, AQUATIC BIOLOGIST II

TICK SURVEILLANCE AND TESTING PROGRAM

I graduated from Lycoming College in 2022 with a B.S. in Biology and a Minor in Philosophy. I began as a limited-term biologist in the tick program in April 2023 and was able to acquire a full-time position the following November. Every month during spring/summer nymphal season, I sample ticks in the counties of the northwest region and work with grant-funded counties in both the northwest and southwest regions. I similarly do winter tick collections throughout the state. I have always wanted a job where I can be outdoors and apply my degree. Here, I can do both. Overall, I am very grateful for this job and enjoy all the places I've been able to see throughout the state.

In my free time, I have an interest in pressing flowers, foraging for mushrooms, bug collecting, and nature photography. Outside of work, I enjoy spending quality time with my husband, Joel, our three goofy dogs, and close friends. I also spend a lot of time painting, reading, watching scary movies, playing video games, hiking, and running.

### JAMSINE CHE, LABORATORY EXTERN

LEARNING THROUGH COLLABORATION

As a graduate student in the Entomology Department at Cornell University, completion of the Master's program involves partnering with a host institution to conduct research. I spent this past summer in the Vector Management Laboratory focused on two main projects: conducting disease surveillance in *Psorophora ferox* and isolating *Culex* mosquitoes for molecular identification.

Although *Ps. ferox* are not known to heavily contribute to vector-borne disease transmission in humans, they still possess vectorial capacity. The goal of this project was to see if we could detect pathogens, in particular Jamestown Canyon virus (JCV), in *Ps. ferox* collected throughout the state in order to determine the potential impact the species may have on public health. I identified (Figure 20), isolated, and tested just over 5,000 specimens collected from host-seeking traps and detected JCV in three *Ps. ferox* samples, making this the first record of the pathogen in this species in PA and only the second record in the US.

*Culex quinquefasciatus* and *Culex pipiens* are known to be morphologically identical, making it extremely challenging to differentiate the two by microscopy. Molecular identification can be utilized to overcome this challenge. During my time here, I identified and isolated individual male *Culex* mosquitoes received by the Laboratory from gravid traps that were not needed for pathogen testing. These collections were taken to Cornell University, where I will conduct molecular identification via gel electrophoresis in the fall. The goal of this project is to determine if *Cx. quinquefasciatus* is present in PA as it is an important vector for diseases that are not of concern in *Cx. pipiens*, such as Oropouche, an emerging arthropod-borne virus.



"Sometimes when I'm out in the field, people will ask what I'm doing and then thank me for it. It reminds me that, at it's core, our jobs provide a valuable service to public health."

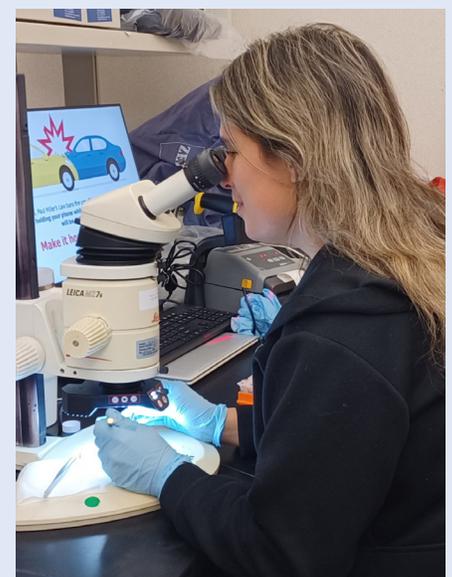


Figure 20. Jasmine Che identifying mosquitoes as a part of her Master's work.



## EVENTS AND UPDATES

### LITTER CLEANUP WAS A HUGE SUCCESS

BY: AVA BRUSHI, MERCER VECTOR-BORNE ILLNESS COALITION

The 2025 sampling season was quite successful for the Mercer County Vector-borne Illness Coalition. One of the memorable moments from the 2025 season was the series of cleanup events that were hosted in Butler, Mercer, and Crawford Counties. The cleanups were held at the 528 Boat Launch in Moraine State Park, Shenango Lake Mahaney Recreational Area, and Pymatuning State Park, respectively (Figure 21). Each cleanup site was near a lake to reduce trash that could potentially become mosquito breeding habitat. Each cleanup was successful with several volunteers. All volunteers were provided with gloves, garbage bags, and vests. Between the three cleanups, the Vector Management Coalition and volunteers were able to fill 100 garbage bags of trash! This trash could have potentially ended up polluting the waterways or becoming mosquito breeding habitat.



Figure 21. Megan Miller, Mercer County and Mike Shaffer, Park Naturalist, after a trash cleanup at Moraine State Park.

### COMMUNITY TIES HELP REDUCE MOSQUITO HABITAT

BY: JERALDY RODRIGUEZ, YORK COUNTY

Annalisa Gojmerac, a member of Keep York Beautiful, and I worked with students from William Penn Senior High School at a local garden (Figure 22). We talked about the importance of having local gardens and supporting the community. I stressed the significance of maintaining community gardens that do not simultaneously contribute to mosquito habitat while also giving tips on how these students can incorporate mosquito habitat mitigation outside of their gardens that improve a sense of community. These tips included encouragement of helping older family members properly take out their trash, cleaning up their properties of artificial containers like buckets that breed mosquitoes, and picking up trash in general when walking around the city.



Figure 22. Jerald Rodriguez, York County, with two William Penn High School representatives at a local community garden.

## UPCOMING EVENTS

### Mid-Atlantic Mosquito Control Association Annual Meeting

February 17 – 19, 2026  
Memphis, TN

### New Jersey Mosquito Control Association Annual Meeting

March 4 – 6, 2026  
Galloway, NJ

### Entomological Society of America Eastern Branch Meeting

March 14 – 17, 2026  
Sarasota Springs, NY