

First COVID-19, now mosquitoes: Bracing for bug-borne ills

Associated Press

Sophia Garabedian had been dealing with a persistent fever and painful headache when her parents found her unresponsive in her bed one morning last fall.

Doctors ultimately diagnosed the then-5-year-old Sudbury, Massachusetts, resident with eastern equine encephalitis, a rare but severe mosquito-borne virus that causes brain swelling.

Garabedian survived the potentially fatal virus after about a month in Boston hospitals, but her parents say her ordeal and ongoing recovery should be a warning as people take advantage of the outdoors this summer.

"It's been a rough year," said David Garabedian, her father. "With any brain injury, it's hard to tell. The damage is there. How she works through it is anyone's guess."

As the coronavirus pandemic subsides for now in the hard-hit Northeast, public health officials in the region are warning about another potentially bad summer for EEE and other insect-borne illnesses.

EEE saw an unexpected resurgence last summer across 10 states: Alabama, Connecticut, Georgia, Indiana, Massachusetts, Michigan, New Jersey, North Carolina, Rhode Island and Tennessee.

There were 38 human cases and 15 deaths from the virus, with many of the cases in Massachusetts and Michigan, according to the Centers for Disease Control and Prevention. Most years, the country sees just half a dozen cases of the virus in humans, the agency said.

In Massachusetts and New Jersey, officials have already detected EEE in mosquitoes this year, the earliest on record in those states. There have been no human or animal cases yet.

"It's unnerving," said Scott Crans, who heads up mosquito control efforts for the New Jersey Department of Environmental Protection. "It could signal a busy year."

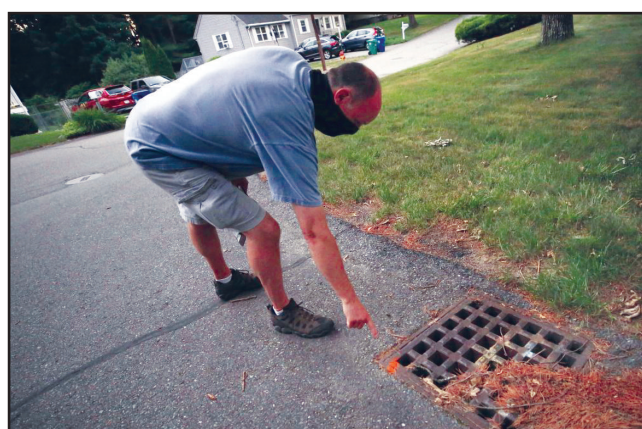
Crans and other state health officials say EEE, which has no cure in humans, tends to come in two- to three-year cycles, but they also stress that mosquito-borne diseases are notoriously tricky to predict.

A relatively mild winter may have benefited mosquito populations, but below-average rainfall could have also provided a welcome counterweight, he said.

Local health officials are also warning about the risk of contracting other insect-borne illnesses as more people are spending a longer time outdoors amid the



Sophia Garabedian, 6, of Sudbury, Mass., who contracted Eastern Equine Encephalitis in 2019, stands for a photograph on a playground, Wednesday, July 8, 2020, in Sudbury. As the coronavirus pandemic subsides for now in the hard hit Northeast, public health officials in the region are bracing for another mysterious virus: Eastern Equine Encephalitis, or EEE, a rare but severe mosquito-borne virus. (AP Photo/Steven Senne)



Chris Gagnon, field operations manager for the East Middlesex Mosquito Control Project, points out a paint marker to identify that a storm drain has been treated for mosquito control on Wednesday, July 8, 2020, prior to driving through a neighborhood in Burlington, Mass. Officials are preparing for another summer with a high number of cases of eastern equine encephalitis, a rare but severe neurological illness transmitted by mosquitoes that hit the state particularly hard last summer. (AP Photo/Charles Krupa)



A crew from the East Middlesex Mosquito Control Project spray to control mosquitos from a pick-up truck on Wednesday, July 8, 2020, while driving through a neighborhood in Burlington, Mass. Officials are preparing for another summer with a high number of cases of eastern equine encephalitis, a rare but severe neurological illness transmitted by mosquitoes that hit the state particularly hard last summer. (AP Photo/Charles Krupa)

coronavirus pandemic.

In Michigan, an invasive mosquito known to transmit dengue, Zika and other tropical viruses has already been detected for the first time this season, said Mary Grace Stobierski, the state's public health veterinarian.

The state also had its first case of West Nile virus this season. A more common but less severe mosquito-borne disease than EEE, it can cause fevers, headaches, body pain and other symptoms. The infection was found in a captive hawk in early June.

Ticks are also expected to

be out earlier and in larger numbers this season because of the relatively mild winter, warned Aaron Bernstein, a pediatrician at Boston Children's Hospital and a director at Harvard's School of Public Health.

That could mean more cases of debilitating Lyme disease and other tick-related illnesses for local health care systems already feeling the pressure of responding to the coronavirus, he said.

"Some of the people going into the woods more now might not be experienced with how to protect themselves in the forest, and

that's a concern," he said.

Officials say people should avoid the evening and early morning hours when mosquitoes are most active, use bug spray and wear long clothing where possible when outdoors.

The CDC has offered states additional help with mosquito testing this season as the coronavirus pandemic has overwhelmed state public health offices, said Candice Hoffmann, an agency spokeswoman.

Officials in eight states and the District of Columbia have so far taken up the offer: Maryland, Ohio, North Carolina, South Carolina, Vermont, Maine, Florida and Arizona.

During last year's EEE outbreak, the CDC provided about \$700,000 in emergency funding and technical assistance to Rhode Island, Indiana, Michigan, and Massachusetts on top of roughly \$18 million it provided to states for annual vector-borne disease surveillance, Hoffmann said.

In Michigan, where six of that state's 10 cases of EEE last year proved fatal, officials this summer have launched a pilot program to improve the state's response to mosquito-borne illnesses.

Ned Walker, a medical entomologist at Michigan State University heading up the effort, said the goal is to create the kind of regular mosquito surveillance system already in place in Massachusetts and elsewhere to better predict and prepare for disease outbreaks.

In Connecticut, officials have boosted the number of testing sites for mosquitoes in its high risk eastern portion, according to Philip Armstrong, a virologist with the state Department of Environmental Sciences.

In Massachusetts, which was the hardest hit by EEE last year, with 12 cases and 6 fatalities, officials have been testing earlier, more often and in a wider range of locations this year in order to quickly identify infection clusters, said State Epidemiologist Catherine Brown. A pilot effort is also testing the efficacy of different larvicides to help cull the mosquito population at its earliest stages, she said.

One troubling development: the two earliest cases of EEE in mosquitoes this year were found in a northern part of the state close to New Hampshire, rather than the virus' typical hotspots near Cape Cod, where officials also detected the virus in a mosquito sample last week.

That, along with last year's widespread cases, strongly suggests the territory of EEE-carrying mosquitoes is expanding, according to Brown. Climate changes that are causing warmer summers and altering bird migration patterns



This time of year, the water level in the rivers are naturally low. Usually, the rains are of the thunderstorm variety and are not long, ongoing, soakers. This can make fishing harder but more centralized. Basically, find the areas that produce the most oxygen and more fish will congregate there.

Another benefit of low water is that it exposes oddities that one normally doesn't see during other seasons. Just the other day, my wife and I were floating the river. No fishing. Just floating. Since she has only recently been trying this,

and local mosquito populations could be among the drivers, she said.

Meanwhile an environmental group is calling on Massachusetts to avoid resorting to widespread aerial spraying of insecticide, which took place six times last year as cases surged.

Maryland-based Public Employees for Environmental Responsibility filed a complaint with the Massachusetts Inspector General's office this month, arguing that 2019's aerial spraying cost more than \$2 million but wasn't effective in reducing EEE-carrying mosquitoes.

Brown disputes the group's assertion, but acknowledges the insecticides can be toxic to bees and other species, another concern raised by the group. "Last year was unprecedented," she said. "No one wants to do that again."

Back in Sudbury, David and Kirstin Garabedian say they're optimistic their daughter can continue to heal from EEE.

Now 6, she was able to return to kindergarten in January before the coronavirus pandemic shuttered schools weeks later. But her parents say she still regularly goes to speech and occupational therapy to deal with lingering speech and memory problems.

Kirstin Garabedian says she understands people want to take advantage of the outdoors this summer.

"Go outside and enjoy yourself, but take the proper precautions," she said. "Just be vigilant. Use common sense."

she has discovered sights she has never seen. It has made me look more intense at the things I may have overlooked.

One of the views came just the other day. I noticed a tree that had succumbed to erosion. It had fallen and was laying parallel to the bank. Not upright. Not growing tall. Not reaching to the heavens. Nope. Laying on its side. And yet,

as I looked closer, I discovered branches with full foliage. Yep. Fallen, and yet finding a way to keep a foothold in its foundation, long enough to produce a harvest of hope. I immediately thought of you. You who have fallen.

You who have lost most of your foundation. You who are parallel with the grave that's trying to suck you in. You who are holding on for dear life.

You see, sometimes your greatest service to God will be when all you have is your most basic belief. It will be when what you're holding on to is as fragile as its ever been. Sometimes your greatest ministry will be when you have fallen, are laying on your side, and have only a small spray of fruit to show for your faith. You see, what brought my attention to this tree was not its abundance of fruit as it stretched its perfect limbs toward the heavens, but what captured my attention was how it was eking out fruit while in its most vulnerable position. You see, it grabs no one's attention when you're doing things as they are supposed to be done. But when God brings water from rock, or fruit from a tree that has been cut low, or hope from a man that has been leveled by an unsuspected blow, an unbelieving world takes notice.

You see, the mighty oak beside this sickly sycamore garnered no praise. But this one seemingly lifeless and battered tree, just might bring hope to thousands of readers. And that each one may be encouraged to realize that as long as there's one root stuck deep in a good foundation, God can bring about noticeable and productive fruit that can give hope to everyone who floats by.

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