

10-26-12 Mosquitoes: 2012 Review

It has been a year like no other, with West Nile virus (WNV) appearing all over the country and 25 human cases in Massachusetts, with one fatal. Eastern Equine Encephalitis (EEE) has also appeared in record numbers and in places where it had never been. We have documented seven human cases; three of them fatal. Four lives lost to tiny delicate mosquitoes.

What the heck is going on? We health agents were taught that it was a cyclical virus with the pattern of two to three years of activity and then disappearing for 15 to 20 years until a new strain of sorts surfaced, amplifying once again between birds and mosquitoes. We experienced a three year cycle in 2004, 2005 and 2006. Why did it return in 2010?

In response to rising concerns from health agents having to deal with mosquito related issues on the forefront at the local level, DPH agreed to increase our ability to discuss our concerns and to stay informed by having conference calls every other week, in addition to any emergency calls that might be needed. We are fortunate to have such a responsive caring Department of Public Health! We had our last call of the season last Friday. While it was our last call, as the season is winding down, it in no way was a discussion of finality or of relief that the season was over.

Much of the conversation revolved around the “Dusk to Dawn Closures” or “Bans on Outdoor activities”. Each town may have worded it differently but the intention was to protect people and we have never had so many boards of health in Massachusetts making this decision or presenting it with such consistency. Now that the risk is reduced with cooler temperatures, it was time to decide if the curfews could be lifted. Traditionally, a “killing frost” is eagerly anticipated as heralding the conclusion of that year’s mosquito borne disease worries. We could stop using repellants and enjoy the outdoors. Well, we’d still be on the lookout for ticks but at least EEE and WNV would be gone.

So, last week health agents around the state were looking at DPH’s definition of a killing frost of at least two consecutive hours of twenty eight degrees (or lower). Many of us had seen frost in our yards but had it been cold enough during the night? We next looked at the National Weather Service (NWS). They had a slightly different definition of a killing frost: temperatures falling below 28 degrees at any point or below 32 degrees for at least three hours. Just as health agents were trying to decide which definition to use, a map from the NWS was circulated showing all on Massachusetts except for Suffolk County and the Cape and Islands, as having experienced a killing frost of the evening of October 12/13. The “frosted” towns were filled in bright red and it was very impressive! That was the science we needed to support our decisions! Or was it?

The day I saw the map at work and was trying to decide if I should remove my “Closed Dusk to Dawn” signs, I was bothered but a gut feeling and the fact that Monday had been a warm sunny day with temperatures in the seventies! When in doubt and looking for answers, give it a

day; sleep on it. I went home to do just that and there I observed mosquitoes bopping around at my kitchen window while I stood safely on the other side at the sink. They were clearly very much alive and they looked mighty hungry, too! My experience was confirmed by many others: people out painting their houses and doing yard work, surrounded by mosquitoes, aggressively biting.

Here's the deal:

1. No weather report can account for every hill and dale, nook and cranny. They are generalized and based on information from specific weather stations. The information may not describe your town or your neighborhood.

2. Mosquitoes are not rooted plants; they fly and they attempt to keep warm in sheltered places. A frost that kills some plants may not kill all mosquitoes. The latest recorded onset for a case of human EEE was on October twenty four!

3. Mosquito species have different habits. The Culex species that carries WNV can overwinter as adults. They are still out there! As they seek shelter, our house is one area they will visit. This explains how we can get a new case of WNV in New England in November and December.

While mosquito activity is significantly decreased, that is not the same as elimination of risk. So, if it is fifty degrees or cooler, the mosquitoes are not very active and, along with the additional clothing we wear at those temperatures, we are pretty safe. Until you see a killing frost in your area and you stop seeing mosquitoes out and about, use repellent.

The season is winding down but it is not yet wrapped up in a neat package marked "closed".

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