

Ag Topics 6-6-11 Mosquitoes and Gnats

If you've been outside lately (like at last weekend's softball tourney in Wayne) you know that it's a banner year for mosquitoes and biting gnats. Most of us are aware of mosquitoes but the gnats seem to be a little busier than usual these days. These pests have some things in common but also some differences that cause for some variation in how to approach managing them.

One thing that they have in common is that they are aquatic insects, needing water to breed in. Another common trait is that it is only the females that bite, needing blood to provide nourishment for developing eggs. Mosquitoes and black flies are both capable of transmitting diseases but in our area the mosquito is the major culprit carrying diseases like West Nile virus in humans and horses.

I haven't put one under my microscope but I suspect that the biting gnats are black flies, sometimes known as "buffalo gnats" since if you look at them closely they seem to have a hump-backed appearance. Black flies develop in moving water, unlike our biting mosquitoes which prefer slow moving or standing water to breed in. The larvae attach themselves to rocks and feed on various small organisms that drift by. They prefer relatively clean water but are capable of surviving in some levels of pollution. They can fly many miles so you don't have to be right beside a stream or river to be affected. Once they emerge from the streams as adults these miserable creatures bite by literally sawing a hole in your skin with their mouthparts, then lapping up the blood, which is part of the reason why such a small insect packs an irritating punch. Since they are so small they need to bite where blood vessels are close to the skin surface, which is part of the reason they tend to bite the facial and head areas. Like mosquitoes they use an anti-coagulant to keep the blood flowing which for many people causes the itching and swelling reaction we are all so familiar with. In the far northern climates, including Canada, they can be so numerous that they can actually severely affect cattle, poultry, and other livestock production.

Mosquitoes can breed in anything that will hold water for about 10 days, including man-made structures such as bird baths, old tires, and rain gutters. We have had a lot of rain lately and there are a lot of available breeding places for them.

Management options are a little different. For mosquitoes we as individuals can have a major impact by scouting out breeding areas like old cans, tires, and rain gutters and eliminating the water. Larger bodies of water like ponds and sewer treatment systems can be treated with a non-toxic larvicide that prevents the mosquito larvae from turning into adults. Some cities have spray programs to kill adults but these are usually only a temporary solution as the mosquitoes will still emerge from the breeding areas. Mosquitoes tend to bite at low light periods and hide in bushes during the hot part of the day so if you plan on having a barbeque, spraying your hedges or bushes during the hot part of the day can make a difference. Wear long sleeved clothing and apply products with deet to repel mosquitoes.

Black flies aren't as intimidated by deet and some people think that vanilla extract will help repel them. I don't have any personal experience with natural remedies but give them a try if you like. Warmer water temperatures will slow down their breeding cycle which is why they tend to taper off later in the summer. For more information on these critters go to entomology.unl.edu and check it out.

Bug zappers are fun to watch but will have little impact on black flies or mosquitoes since they are not attracted in large numbers to light; they zone in on our body by temperature and odor.

Funny, a song keeps going through my head. Buffalo gnats don't you come out tonight, come out tonight... or something like that. I thought I heard it on the internet.