

THE OUTLET

AQUARIUM & ZOO

FACILITIES

ASSOCIATION

WINTER 2015

That Bites! By John Kanzia

Stomoxys calcitrans, commonly known as the stable fly or biting house fly, is a fly commonly found near hooved animals (hence the name stable fly). While they are best known for feeding on hoofstock, they will pretty much feed on anything that will stand in one place long enough for them to land and bite. Similar to mosquitoes, this type of fly uses a proboscis to penetrate the skin of its target to suck out a blood meal. Stable flies choose their feeding areas based on proximity to both a food source and a source of shade. After taking a blood meal, the flies will head for the nearest tree or bush and wait under the leaves to stay cool and digest their meal. They'll repeat the process all day long, becoming a nuisance to animals, staff, and guests alike. Here in the Midwest, the fly season runs from May through October, the months that are consistently above 60° F, which is warm enough for the flies to move their wings fast enough to take flight.

We worked with our pest control contractor Terminix and Dr. Jerry Hogsette, a Research Entomologist with the USDA's Mosquito & Fly Research Unit, to take a closer look at our fly issue and come up with a solution. We'd been using bug zapper lights near our hoofstock yards, but found that weren't catching many stable flies with them. Instead, we caught lots of bottle flies like *Lucilia sericata*, the shiny metallic green flies that you'll commonly see around food or feces. Dr. Hogsette reviewed a number of newer trap designs developed to target stable flies. One type was found to be effective at attracting stable flies, either through the alternating black and white colors, or the way the foam wrap reflects sunlight. We chose this design, commercially available as Knight Stick® fly traps and deployed them at a number of locations around the park where we knew stable flies were an issue. During the 2013 season, I was able to trap and count nearly 18,000 flies from traps deployed at nine locations around the zoo perimeter (to find out which direction the flies were coming from) and near hoofstock yards. Due to the exceptionally long winter that we had last year, I only caught about 10,000 flies during the 2014 season.

The Knight Stick® trap is made up of seven pieces; a base, a cylindrical body, a flat plastic horse head, a disposable foam wrap pre-applied with an adhesive, and three binder clips to secure the wrap to the trap. When set up, it looks like a large knight chess piece, and the horse head allows you to pick up the trap without touching the sticky wrap. You can check out www.bugjammer.com for information about flies and ordering information; the more traps you purchase, the cheaper they are. A starter kit with one trap and three disposable wraps is \$44.95. Wraps have enough surface area to accommodate about 1,000 flies. Depending on the density of flies in the area that the trap is deployed, wraps can last anywhere from a few days to a month before filling with flies.



Stomoxys calcitrans, Stable Fly
Source: Wikipedia

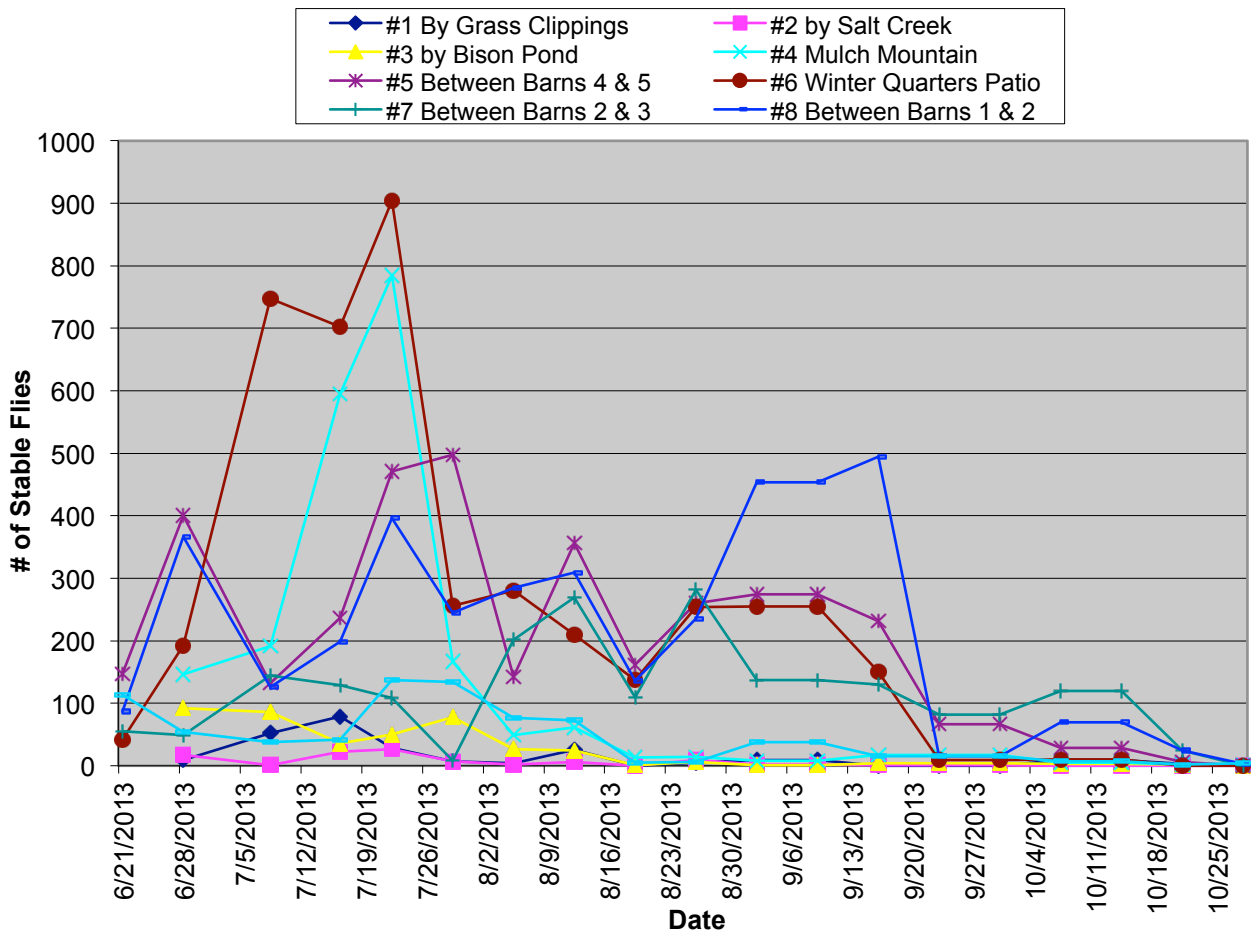


Lucilia sericata, Green Bottle Fly
Source: Wikipedia



KnightStick® Fly Trap
Source: www.bugjammer.com

Knight Stick - Stable Flies Trapped by Location at Chicago Zoological Society's Brookfield Zoo



You can see from the chart above that the fly season in Chicago peaks in July and ends in October. In warmer parts of the country and world, the fly season could be much longer!

ARTICLE REPRINTED BY PERMISSION of: John Kanzia Environmental Quality Manager Chicago Zoological Society/Brookfield Zoo 3300 Golf Road Brookfield, IL 60513 (708) 688-8514 (708) 688-8936 fax John.kanzia@czs.org AZFA's quarterly newsletter, Winter 2015, John Kanzia