

By  
**Mike Donahoe**  
June, 16, 2003

### **Ouch, the Yellow Flies Are Biting**

It's yellow fly season again in Northwest Florida and the villain is out in force. The name yellow fly is commonly used to describe about a dozen different species of deer flies in the horse fly family Tabanidae. They are yellow to black biting flies ranging in length from about 3/8 to 1/2 inch. They have stripes on the abdomen, and possess mottled wings with dark patches.

Yellow flies, or deer flies, are vicious, painful biters that feed on the blood of cattle, horses, dogs, deer, other mammals, and humans. They cut through the skin using their razor-sharp mouthparts and feed on the blood pool that is created. While feeding, an anticoagulant is injected into the wound and causes the blood to flow freely. There may be an allergic reaction to the salivary secretions released by the insects as they feed and the wounds are excellent sites for secondary infection. Pathogens may be transmitted from flies that are disturbed while feeding on one animal and begin feeding on another. It is known that deer flies can mechanically vector Tularemia from rabbits to people. Like mosquitoes, it is the female fly that bites. The males are mainly pollen and nectar feeders.

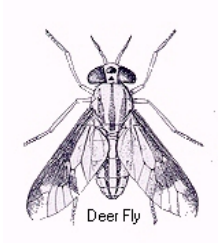
Female deer flies typically lay their eggs in masses containing 50 to several hundred eggs. Most species deposit their eggs on overhanging aquatic vegetation around ponds, streams, swamps, and other wetland areas. Eggs hatch in five to seven days, and the larvae fall into the water or mud where they feed on decaying organic matter or other small aquatic organisms. The life cycle from egg to adult is about one year.

Deer flies tend to congregate in shaded, humid areas such as around the edges of forests and along rivers and streams. Some species are most active in the early morning while others are more numerous in late afternoon. They wait in shady areas under bushes and trees for a host to happen by. Sight is the main host finding mechanism, but carbon dioxide and odor released from their hosts also play a role. Moving objects, especially if dark colored, are most prone to attack.

Currently there are no adequate means for managing populations of deer flies. It is impractical in most regions to eliminate their breeding areas, especially along wetlands, where these flies are commonly found. The use of insecticides is generally thought of as economically and environmentally unfeasible. Spraying for the adults is also ineffective. For personal protection, long sleeve shirts and pants in combination with a repellent containing DEET are effective. Repellents do not prevent flies from landing, although they may inhibit the flies from biting. For livestock, pyrethroid pour-ons or permethrin-based sprays function as limited repellents.

Traps can be used to reduce localized populations and a number have been developed which attract these flies using dark, moving objects, as well as carbon dioxide and octenol. Dr. Russ Mizell, UF Entomologist

based at the North Florida Research and Education Center in Quincy, developed a trolling deer fly trap that has proven very effective. After numerous experiments with different shapes and colors, the trap that enticed the most deer flies proved to be a 6-inch plastic nursery pot painted bright blue and placed upside down on a rod. It worked best when suspended three to six feet above the ground on the hood of his pickup and trolled no faster than 10 feet per second (about 7 miles per hour). Mizell says the trap can be mounted on a vehicle, tractor, lawnmower or four-wheeler. The trap must be covered with a sticky material such as Tanglefoot, (available at many garden centers) to catch and remove the flies. The traps are remarkably effective, Mizell said. "Many times after running the traps through an area, we found there were no deer flies left," he said. "You trap them out for a short period until they repopulate the area." For more information on Mizell's deer fly trap, visit <http://pestaalert.ifas.ufl.edu/deerfly.htm>, a University of Florida web site.



adult yellow fly, *Diachlorus ferrugatus* (Fabricius)

Mike Donahoe is County Extension Director for Santa Rosa County.

Extension Service programs are open to all people without regard to race, color, sex, age, handicap or national origin.