

# Biology and Control Blind Mosquitoes (midges)

By Dr. Rui-De Xue & Dr. Arshad Ali



“Blind mosquitoes” is a layman’s term, which may refer to several species of aquatic midges that are somewhat mosquito-like in appearance, however they lack scales on the wings and do not bite, suck blood, or carry diseases. Blind mosquitoes often occur in huge swarms after they emerge in large numbers to pose a nuisance problem. Recently, a large number of blind mosquitoes have emerged from St. Johns River, SR 13, and man-made ponds in the Ponte Vedra area which caused a nuisance problem.

## Importance:

The water level in St. Johns River was low last year and the residents living close to the riverside where blind mosquitoes breed experience severe nuisance and economic problems. A high number of blind mosquitoes covered most parts of the buildings and vegetation/grass in the backyard. Outdoor activities are often disrupted by the annoyance of these pests.



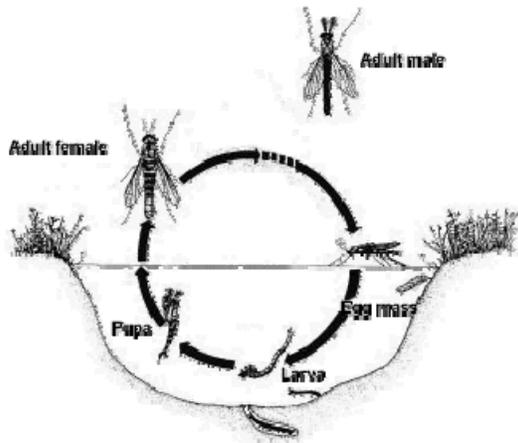
At night adult midges are attracted to lights around homes and businesses. When large numbers of blind mosquitoes are present, serious damage can occur to paint, stucco, and other wall finishes. Vehicle headlights and windshields get covered. Thousands of dollars are spent cleaning dead bodies of blind mosquitoes from sidewalks, porches, and vehicles.

As blind mosquitoes decay, they have a smell similar to rotting fish.

Fish utilize the larvae of blind mosquitoes as a food source. However, the nuisance derived from large numbers of blind mosquitoes far out weighs the benefits.

There are 3,000 – 4,000 species of aquatic midges in the world, of which a few species have economic importance. Some species breed in the rice fields and cause damage to rice roots. Some species of larvae and adults may cause some medical problems, such as allergies and asthma. The species with small-body size may fly into peoples’ mouths, eyes, and ears. Some people may inhale the pests.

## Life Cycle:



Blind mosquitoes have four stages in their life cycle. A gravid female may lay about 1,000 eggs on the water's surface during early evening or morning. The **egg mass** will sink to the bottom of the body of water where the eggs hatch into larvae in 2-7 days.

After hatching, the 1<sup>st</sup> stage **larvae** feed on gelatinous material for about 2 days and then leave the mass. **They burrow into the mud and make tubes or tunnels to live.** The tube has an opening at the end to allow the larvae to feed. The larvae feed on suspended matter in the water and organic matter in the mud.

After molting, the larvae look pinkish or a deep **red color** and the stage lasts for 4-7 days depending on temperature.

The **pupae** leave the tube and swim to the water's surface. The pupae do not feed and take a few hours to emerge.

Male and female **adults** usually swarm at night to mate. They do not feed and live for 3-7 days. The adults die after mating and laying their eggs. The entire life cycle of the blind mosquitoes usually takes about 2 weeks. In St. Johns County, Florida, it occurs from April to November, with the majority of the

activity from June to September. There were 6-7 emerging peaks in 2006.

## Prevention & Control:

Blind mosquitoes are extremely difficult and costly to control because the larvae live on the river, lake or pond bottom. The entire volume of water must be treated to provide effective control. Usually, the larval control is not feasible except for a small lake and pond. In small lakes and ponds, *Bacillus thuringiensis israelensis* or Altosid which is used for mosquito larval control may be used for blind mosquito control, but the application rate should be 8-10 times more than the rate for mosquito control.

Adult blind mosquito control should be enhanced by controlling light traps, electronic zappers, and /or using lights to attract blind mosquitoes to stay in the aquatic areas away from the residential and recreational areas.

Individuals can control blind mosquitoes around their homes by using fogging units and following the label and instructions or call pest control for service.

The residents should limit the lights around their homes when blind mosquitoes emerge and repair the screens in windows and doors and reduce outdoor activity.

Effluent from food-processing plants, septic tanks, sewage treatment plants, and leaching of fertilizers from lawns and agriculture around the lakes, rivers, and ponds supply nutrition (food) for blind mosquito larvae. As the available food increases, the blind mosquito populations increase.