

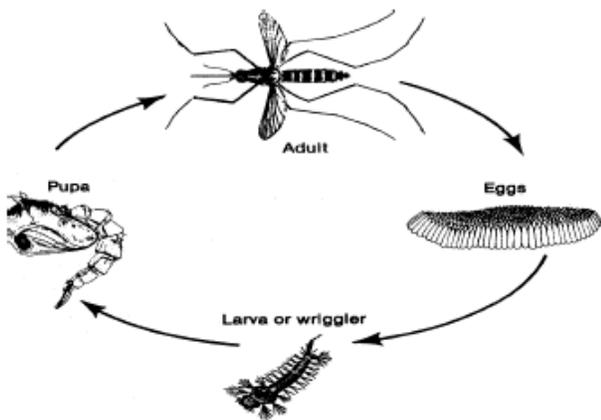
*Providing Leadership in Environmental Entomology*

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## MOSQUITO CONTROL IN AND AROUND THE HOME

In man's continual war against insects, mosquitoes remain a serious problem. Mosquitoes are capable of inflicting a painful bite and making unusable recreational areas. A more serious problem arises when mosquitoes create a health menace for humans and domestic animals. Some of the most deadly diseases of humans (encephalitis, yellow fever, malaria, dengue and filariasis) are mosquito borne.

**Life cycle.** During their life mosquitoes, go through four stages of development: egg, larva, pupa, and adult. The first three stages take place in water. The females usually require a blood meal before egg production, then lay batches of 50-200 eggs on or near the water surface.



**Figure 1.** Life stages of a mosquito.

Ideal breeding places include temporary flood waters, edges of lakes and ponds, woodland pools, marshes, swamps, discarded tires, trash, tree stumps, knot holes, and bird baths. The eggs of most species hatch in two or three days. Some species require a drying period and may lie dormant for months.

Larvae feed mainly on bits of organic matter in the water and most species must come to the surface for air. After about a week, the larvae pupate and are comma-shaped. Sometime they are called tumblers

because of the motion they make when the water is disturbed. The pupal stage lasts about two days.

The adult is a flying insect and only the female bites and feeds on the blood of man and other animals. Females may live several weeks.



**Figure 2.** Adult mosquito feeding on a person.

**Control.** Mosquito populations can be controlled in two ways: source reduction and chemical control. Source reduction is the least expensive and most effective of the two methods. It requires finding and eliminating possible breeding places. Look for standing water and remove unneeded water containers such as tin cans, and old tires. If these things need to be saved, place them where water won't collect in them. In ponds, garden pools and other areas that cannot be drained, mosquito larvae may sometimes be controlled biologically with minnows (guppies or *Gambusia*) that feed on the developing insects. Other things that are part of source reduction mosquito control include:

1. Tightly covering cisterns, cesspools, septic tanks, barrels and tubs of stored water;
2. Emptying and washing birdbaths weekly;
3. Cleaning out rain gutters;
4. Examining flat roofs after rains to be sure no water remains on them;
5. Draining or filling stagnant pools and swampy places;
6. Removing debris and floating vegetation from areas that can't be drained or filled;

7. Eliminating standing water in saucers under potted plants;
8. Examining trees for decayed places that hold water and then drilling drainage holes to remedy the situation (filling the holes with concrete is no longer recommended as this is detrimental to the tree's health).

Chemical mosquito control should be used only as a supplement to source reduction. Outdoors, some adult mosquitoes can be controlled with insecticide sprays. Indoors mosquitoes can be controlled with aerosol sprays. Many insecticides are labeled for use by homeowners. Products can be purchased at hardware, grocery and discount stores. Before using any pesticide, always read the label and follow directions and safety precautions.

Many communities, cities and counties participate in projects that coordinate area-wide mosquito management districts. Large area efforts are likely to be more successful in controlling mosquito populations than the efforts of a single property

owner. For more information about mosquito control programs, contact your local county health department or the main office of the South Carolina Department of Health and Environmental Control, 2600 Bull Street, Columbia, SC 29201.

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EHS/HS-7 (New 09/1998) (Revised 01/2001).