

fruit and plant juice, while females use their long proboscis to bite animals and humans to feed on their blood, whose protein is needed for egg laying. Females may continue this pattern for days or weeks, while males normally die a few days after mating. The average life cycle of a female mosquito is 3 to 100 days, while males live 10-20 days.

### **BITES**

Once a female mosquito bites, she sucks your blood until her abdomen is full. The proteins from the insect's saliva induce an immune response from your body. Bitten skin swells producing a bump that itches. The swelling will subside, but the itch continues until your immune cells break down the mosquito's saliva proteins. Apply mild soap and water to bites and scratching should be avoided. Anti-itch creams such as Calamine Lotion or cortisone creams give relief.

### **DISEASES**

Mosquitoes are carriers of several diseases. Malaria, transmitted by Anopheles mosquitoes, sends a parasite into your bloodstream with symptoms developing between six days and several months after infection. Symptoms include fever, chills, headaches, muscle aches, and flu symptoms. This potentially fatal disease is dominant in tropical or subtropical climates, but can be treated with anti-malarial drugs. Malaria is not found in the U.S.



Yellow fever, transmitted by Aedes aegypti mosquitoes, is common in Africa, but doesn't occur in the U.S. Symptoms of infection are similar to malarial infection, but can also include nausea, vomiting and jaundice. Yellow

### **WANT MORE INFORMATION?**

#### **Contact Park Rangers:**

Prince George's County  
14955 Pennsylvania Ave.  
Upper Marlboro, MD 20772  
301-627-7755  
TTY 301-699-2544

#### **Contact a naturalist at:**

Prince George's County  
Clear Water Nature Center  
Cosca Regional Park  
11000 Thrift Road  
Clinton, MD 20735  
301-297-4575

Watkins Nature Center  
301 Watkins Park Drive  
Upper Marlboro, MD 20772  
301-218-6702

Mt Rainier Nature/Recreation Center  
4701 31<sup>st</sup> Place  
Mt. Rainier, MD 20712  
301-927-2163

Patuxent River Park  
16000 Croom Airport Rd.  
Upper Marlboro, MD 20772  
301-627-6074

Montgomery County  
Brookside Nature Center  
Wheaton Regional Park  
1400 Glenallen Ave.  
Wheaton, MD 20902  
301-946-9071

Meadowside Nature Center  
Rock Creek Regional Park  
5100 Meadowside Lane  
Rockville, MD 20853  
301-924-4141

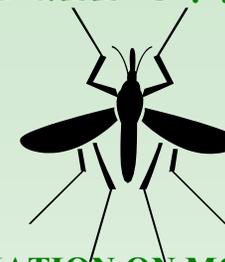
Locust Grove Nature Center  
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777 Democracy Blvd.  
Bethesda, MD 20817  
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The Maryland-National Capital Park  
and Planning Commission  
Department of Parks and Recreation  
Prince George's County  
Natural and Historical Resources Division  
Park Ranger Office  
PGParks.com

## **Buzz Off!**



### **INFORMATION ON MOSQUITOES**

It's a warm summer day and you are having a cookout when suddenly, you notice a bump swelling on your arm accompanied by a pesky itch. The culprit is most likely a mosquito bite. Mosquitoes are insects that live on almost every continent. Over 2,700 species exist throughout the world, about 200 of which live in the United States. They are considered pests to humans throughout the warm months due to the painful, swelling bites humans experience after a mosquito pierces the skin. They can also carry diseases and transport illnesses to humans and animals alike.

## MOSQUITO ABCs

Although usually regarded as pests, mosquitoes play an important role in the environment. Larvae are a significant source of food for other aquatic organisms, while adults are meals for bats and birds. Also, several species of adult mosquitoes serve as pollinators of several plants, including certain orchids.

All insects including mosquitoes have three basic body parts: head, thorax, and abdomen. The head contains sensors mosquitoes use to find prey, as well as, the proboscis, a long antenna only females have for biting.

Mosquitoes use three types of sensors to target prey: chemical, visual, and heat. They can sense carbon dioxide and lactic acid from about 100 feet away, which is normal for mammals and birds to excrete during breathing. Contrasting clothing like bright red or orange also makes you an easy target. In addition, mosquitoes can detect heat, therefore, if close enough they can easily find warm-blooded birds and mammals, including you!

## LIFE CYCLE

All insects including mosquitoes are hatched from eggs and undergo several growth stages before reaching adulthood. Females lay eggs in water which may be rain pools, water inside a tree, or any standing water. The larva and pupa stages of a mosquito's life take place here, feeding on algae and other organisms in the water.

After the transition from the pupa stage to an adult, a mosquito's growing cycle, which can be about 2-3 weeks, is complete and they become flying insects. Normally the first activities adult mosquitoes perform are mating and feeding. Males feed on sugary substances like



fever can be fatal; however, a vaccination is available and mosquito control helps prevent infection.

Encephalitis is viral and spread by the Aedes or Culiseta mosquito. Symptoms include high fever, neck stiffness, headache, confusion, and sleepiness. Diseases Encephalitis mosquitoes carry include St Louis, Western Equine, Eastern Equine, La Crosse, and West Nile. West Nile has historically been prevalent in the Middle East and Africa; however, recent cases of West Nile in the U.S. have increased concern regarding mosquito control. Chances of a person becoming severely ill from one mosquito bite remains low and taking precautions reduces risk. Risk is higher for people above 50 years of age, however, anyone can be infected. West Nile is not contagious from person to person and there is currently no vaccine for the disease.

Dengue fever is carried by the Asian Tiger mosquito, native to East Asia. It is also transmitted by Aedes Aegypti mosquitoes in the tropics. Dengue fever is viral and yields illnesses such as viral flu and hemorrhagic fever. Of special interest for pets, heartworms are transmittable to cats, dogs, and other animals via a mosquito bite! Heartworms negatively affect blood flow from the right side of the heart to the vessels that serve the lungs. If left untreated, heartworms could cause your pet to develop congestive problems of the heart and other major organs, and lead to the loss of your pet. Heartworms are not transferable from animal to animal, and must be transmitted by an infected mosquito. Although humans are not normally hosts of heartworms a few rare cases have been reported.

## PREVENTION

Several measures can be taken to reduce mosquito bites when outdoors. Clothing that covers

most of your body, if climate allows, is a good deterrent. Mosquito repellants that contain NN-diethyl-meta-toluamide (DEET) keep the insects away. Lower concentrations of DEET, usually between 10-30%, are recommended for children. OFF® offers a product line with a variety of choices for repelling insects in various environments, including sprays, citronella candles, and mosquito coils. The AVON© product Skin-So-Soft has been known to deter mosquitoes; however, its only effective for short periods of time. If you're going on a camping trip, be sure to keep the zippers on your tent well fastened to keep mosquitoes from entering. If you decide to open the windows of your home, check screens for holes or tears and repair them if necessary. For homes without screens, mosquito nets can be placed over the bed to keep them from biting during the night.



As previously explained, mosquitoes need standing water to breed, therefore, reducing mosquito populations can be achieved by removing standing water in your yard in items like water cans and old tires. Stocking garden lily ponds with mosquito larvae feeding fish will help reduce the chance of breeding. Commercial pesticides and biological mosquito control are available to kill mosquito larvae and adults. Some communities also control mosquito populations through widespread pesticide spraying to control populations.

## SURF THE WEB FOR MOSQUITO INFO!

American Mosquito Control Association:  
<http://www.mosquito.org>

Center for Disease Control and Prevention:  
<http://www.cdc.gov>

U.S. Environmental Protection Agency (EPA): <http://www.epa.gov>