



SOUTH CAROLINA FAMILY AND COMMUNITY LEADERS
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Country Women of the World and in partnership with Clemson University Cooperative Extension Service
SCFCL website: <http://www.scfcl.com>

Leader Training Guide

Title: Biting Pests Around Homes.

Objectives:

Understand the biology and habits of three of the most common biting pests around homes in South Carolina: mosquitoes, ticks and chiggers.

Learn how to identify areas where mosquitoes, ticks and chiggers live.

Lesson Overview/Introduction:

Bug bite versus bug sting; what is the difference? Many times, when we are hurt by an insect or similar creature, we call it a bug bite. While it may be a bite from the mouth of the pest, we also can be stung by a stinger from backside of the insect. Like a needle, a stinger is stabbed into a victim, often with painful venom. In almost all stings, venom is injected into the wound. Insects usually sting people only for defense when they feel threatened. Many bees, wasps and ants can sting.

A bite occurs when the pest feeds on a person. Unlike stinging pests, many biting pests will actually attack people, usually to get a blood meal. This lesson will review some of the most common biting pests found around homes in South Carolina: mosquitoes, ticks and chiggers.

Lesson:

Mosquitoes:

Mosquitoes are one of the most common biting insects in South Carolina. The most common biting mosquito during the daylight is the Asian tiger mosquito. In the world, mosquitoes transmit many types of diseases, but for most people that are bitten in South Carolina, they do not contract a disease. Reactions to mosquito bites can vary, but many people experience a localized, raised, red and itchy skin area for several days at the bite site.

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 and then lay batches of 50-200 eggs on or near the water surface. 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. 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.

In many areas, effective control with chemical treatments by homeowners is limited. The most practical solution to reduce any bites that may occur would be to wear protective clothing. Wear long-sleeved shirts, long pants and hats when in infested areas. If not skin sensitive, consider repellents labeled for skin application or clothing application. For skin application, products containing DEET or Picaridin are usually the most effective and available. There are also repellents for clothing containing permethrin. Consult with a physician if there are any health concerns about using repellents. Follow all label directions of any products that are used.

Ticks:

Ticks are very common in South Carolina. Ticks lay their eggs in various places, but not on an animals or people and usually not in houses. They have three life stages during which they feed on warm-blooded animals. Immature and adult ticks often wait on tall grass and vegetation or bushes where people and animals tend to walk. When a person or animal passes by, they will fall on the individual and start to walk on their host's body looking for a place to bite and feed on blood. Generally, they remain on the host for several days while feeding, becoming engorged over time. Most tick bites only cause an itchy, red area on the skin around the bite site, but some ticks can transmit diseases such as Lyme disease or Rocky Mountain spotted fever. An individual concerned about any tick diseases, or having a localized skin reaction to any actual bite, should contact a doctor.

Checking one's body when coming in from potential tick infested areas is a good way to find and control ticks. Taking a shower and inspecting body areas such as under arms around hair lines can remove ticks before they bite. Repellents containing permethrin, designed for clothing application or products containing DEET or picaradin for skin application can also help when outside. Follow all label directions when using these products. Tucking socks over long pant legs can make it difficult for ticks to crawl up a person's leg. Keeping grass and vegetation low around one's property can help reduce the incidence of ticks. Insecticide sprays labeled for tick control applied to grassy and bushy areas where ticks harbor can also help with control, but is not recommended unless the tick populations are very high and identified in the area to be treated. In this situation, a treatment by a pest management professional may be the best strategy.

If a tick does bite, there are a few things that should be done. First, carefully remove the tick by grasping it with a pair of tweezers at the point closest to the skin (don't grab the body of the tick). Pull it out slowly and steadily. After the tick is removed, disinfect the bite area. Also, make sure that you don't crush the tick because if the tick is infected, crushing it could introduce the disease into your body. Save the tick by placing it in a small container with rubbing alcohol. This way if you suspect a tick-related problem later on, the tick can be identified. However, keep in mind that to test the tick for disease, it must be kept alive. Finally, record the date on your calendar that you were bitten just in case symptoms appear later.

Chiggers:

The term chigger refers to an immature stage of large group of mites. During the mite's life cycle, only the chigger stage will feed on people or animals. Chiggers do not burrow into the skin as is commonly believed. Instead, they attach to the skin, often near hairs, and drink fluids from the skin cells. Most people have a reaction to chiggers which include itching and small red, raised areas on the skin.

The most practical solution to reduce bites is to wear protective clothing. Wear long-sleeved shirts and long pants when in infested areas. Consider tucking pant legs into socks for protection around ankles. If not skin sensitive, products containing DEET or Picaridin are usually the most effective and available. Similar for mosquitoes and ticks, there are also repellents for clothing containing permethrin. Consult with a physician if there are any health concerns. Taking a shower as soon as possible after being in a chigger infested area will also help reduce bites.

Chiggers will harbor on high grass, weeds and shrubbery. Insecticides will kill chiggers, thus most sprays labeled for turf and ornamental areas should be effective in controlling chiggers. However the best way to control chiggers is mowing grass and keeping weeds to a minimum to reduce their habitats

Lesson Summary:

Unlike stinging pests that only sting when they feel threatened, many biting pests actually seek people and animals to feed. There are many types of biting insects and related creatures, but some of the most common around homes in South Carolina are mosquitoes, ticks and chiggers. While these pests cannot be eradicated, their numbers can be reduced by changing the habitats where they live and people can reduce their chances of being bitten by taking precautions such as wear protective clothing and using repellents as directed by the label directions.

Suggested Activities:

Survey your yard or other outdoor areas where you spend time. Make a simple map of the areas and highlight where mosquitoes, ticks and chiggers may live.

For mosquitoes, think about all the places where they could breed. This would include almost anything that can hold water. These places could include birdbaths or pet bowls where the water is not changed frequently. Other items such as pots, tires, clogged gutters or even tree holes. Think about ways that you can keep water from collecting including you taking action to dump the water from containers.

For ticks and chiggers, think about all the places where they could wait for you or an animal to pass by. This would be tall grass, weeds or low bushes, especially on the edges of your property or along paths. Think about ways to keep these areas cut or trimmed to reduce the places where ticks and chiggers can live.

Suggested Materials:

Asian Tiger Mosquito Fact Sheet:

http://www.clemson.edu/cafls/departments/esps/factsheets/medvet/asian_tiger_mosquito_mv12.html

Ticks Around Your Home Fact Sheet:

http://www.clemson.edu/cafls/departments/esps/factsheets/medvet/ticks_around_your_home_mv05.html

Chigger Fact Sheet:

http://www.clemson.edu/cafls/departments/esps/factsheets/medvet/chiggers_mv08.html

Lesson Prepared by:

Dr. Eric Benson, Entomology Professor and Extension Specialist, Clemson University.

Lesson Review by:

Dr. Susan Barefoot, Extension Food Safety & Nutrition Program Team Leader

Sources/References:

Physician's Guide to Arthropods of Medical Importance, Fourth Edition. By Jerome Goddard. CRC Press. 2003.

Mallis Handbook of Pest Control, Tenth Edition. Stoy A. Hedges, Editorial Director. 2011.