Introduction

Chiggers attack homeowners, campers, picnickers, hikers, berry pickers, fishermen and others in low, damp areas where vegetation is rank, such as woodlands, berry patches, orchards, along lakes and streams. Even drier places where vegetation is low, such as lawns, golf courses and parks can harbor this pest. Bites cause intense itching and small, reddish welts on the skin. These symptoms often are the only way of knowing that an area is infested, because chiggers are so small that most cannot be seen without a magnifying glass.

Identification

Chigger mites in the nymph and adult stage have four pairs of legs and hairy bodies. They are about 1/20 inch long and usually are brilliant red. There is a marked constriction in the front part of the body. Larvae are about 1/150 inch in diameter and orange-yellow or light red, with hairy body and three pairs of legs. Mouthparts include two pairs of grasping palps with forked claws.

Life Cycle and Habits

Adult chiggers overwinter near or slightly below the soil and in other protected places. Females become active in the spring and lay up to 15 eggs per day in vegetation. Eggs hatch into six-legged larvae, the only stage that attacks man and animals. After engorgement, often requiring one to several days, larvae drop off the host and transform into eight-legged nymphs, which mature to the adult stage. Nymphs and adults feed on eggs of springtails, isopods and mosquitoes. The life cycle is about 50 to 70 days, with adult females living up to one year and producing offspring during this time. Repeat generations occur in warmer climates, whereas only two to three generations develop each season in some northern states. Chiggers are usually encountered in late spring and summer in areas where weeds and briars have become overgrown. Young chiggers attach themselves to the skin of people, domestic animals, wild animals (including reptiles), poultry and birds. The preferred feeding location on people is parts of the body where clothing fits tightly over the skin.

Bites

Chigger larvae do not burrow into the skin, nor do they feed primarily on blood. After piercing the skin, these mites inject into the host a fluid that liquefies parts of the tissues that are ingested. Also, this digestive fluid causes surrounding tissues to harden, forming a little tube of hardened flesh from which further liquefied tissue may be withdrawn. After a larva is fully fed, it drops from the host, leaving a red welt with a white, hard central area on the skin that itches severely and may develop into dermatitis. Any welts, swelling, itching or fever will develop within 24 hours. If nothing is done to relieve itching, symptoms may continue for a week or more. Scratching a bite may break the skin, resulting in secondary infections.
Chiggers are not known to transmit any disease in this country.

Control Measures

Skin Care
Take a hot, soapy bath immediately after returning from a chigger infested area. Apply a thick lather, rinse and repeat several times to kill many attached and non-attached chiggers. Apply an antiseptic to the welts to prevent infection and kill additional mites. For temporary relief of itching, apply ointments of benzocaine, hydrocortisone or others used for relief of poison ivy or oak itching. Do not wear the same infested clothing later; launder infested garments in 125 F degree water.

Prevention

Before going into an area where chiggers may be present, protect yourself by using a repellent. Use diethyl toluamide (Off, Deet, Muskol), ethyl hexanediol (Rutgers 612), or dimethyl phthalate, which are available at most drugstores and hardware stores. Apply the repellent to clothing or skin by rubbing or spraying it according to label directions. Do not saturate the cloth. Some kinds of rayon or other synthetic fabric may be damaged, so use caution. Nylon, cotton or wool will not be harmed. Do not let repellents touch painted surfaces or plastic objects, such as fountain pens, fishing rods, watch crystals or frames of eyeglasses.

Insecticides
Treating chigger trouble spots is quicker and less expensive than treating an entire area. Place a piece of black cardboard edgewise on the ground and observe it for a few minutes. Any chiggers present will climb to the top and congregate there. Make this test in 10 to 12 different spots in different kinds of cover, such as grass, dead leaves and decaying twigs. Protect yourself with repellent when making the survey. Unless the entire area is infested, treat only the parts where control is desired, such as grass around picnic tables, lawn chairs or recreational equipment. Look for insecticides labeled for landscape insect control. Retreatment may be needed after two to three weeks in heavy mite infestations. Spray the grass, shrubs and trees in lawns, parks, campgrounds and golf courses, and keep people and pets off treated areas until dry. Before using any insecticide, read the label and follow directions.