



Question: How Did This Pest Get Its Name?

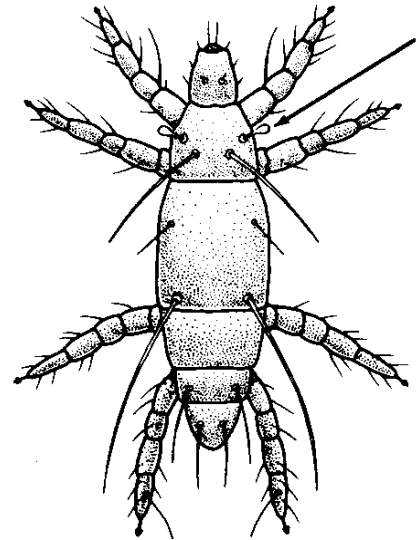
The Straw Itch Mite

Just the name makes you want to scratch doesn't it? This tiny mite (too small to be seen with the naked eye) is associated with straw, grasses, and grains. It's also sometimes referred to as the hay itch mite, grain itch mite, and straw mattress mite.

But these mites are not feeding on the straw, grasses, or grains. Instead, they are predators on insects that are feeding on these plant materials. The mites feed on the larvae of grain moths and stored product beetles like the sawtoothed grain beetle. Less often, the mites may feed on the larvae of wood-borers or other insects. In fact, straw itch mites are considered to be beneficial. Researchers are looking into using them as biological control agents for the caterpillars of certain meal moths and for control of fire ants. Straw itch mites reproduce rapidly and can build up to large numbers in the right environment.

You may not consider them beneficial if you are the unlucky human (or pet) who comes into contact with them. Their bites produce a skin dermatitis, a rash which can cover large areas of the body. The itchy pustules may take 10-16 hours after exposure to appear and can last several days. In the olden days, these mites were a problem primarily for those threshing straw or harvesting grains, or for those who slept on straw mattresses. There have been cases of 4-H Club kids at county fairs being infested from the straw they were using to bed their animals and on which they were also sleeping.

Today, you are most likely to come in contact with them if you treat bulk stored grain that is infested with the mites and their prey. Grain that has a high moisture level is especially subject to infestation. Straw itch mites are sometimes found in straw mulch, pine needles, or wood mulch used for landscaping. If you're working in infested grain or handling infested mulch, treat your clothes with an insect repellent. Then remove and wash your clothes and take a shower as soon as possible after you leave the site.



Straw itch mite
Pyemotes tritici

Granular Insecticides - Part I

Why They Are a Good Choice for Certain Sites

Granular insecticide formulations are similar to dust formulations except that granular particles are larger and heavier and can't be applied with a duster. The active insecticide is coated onto or absorbed into particles made from an absorptive material like clay, pieces of corn cobs, or walnut shells.

The amount of active ingredient in granular insecticides is relatively low, ranging from 1 to 15 percent. The symbol G is often used on the pesticide label to denote a granular formulation.

Granular pesticides are used to control pests in agricultural, ornamental, turf, aquatic, right-of-way and public health. They are most often applied to the soil to kill insects, weeds, or nematodes. In the structural pest control industry, granules are mostly used around building foundations to prevent outside insects like crickets, cockroaches, ants, and millipedes from moving indoors. Granular baits are also used outdoors for flies around restaurants, dumpsters, and other garbage areas. Some granular baits are also labeled for indoor against cockroaches, ants, and crickets.

Some granules are applied to soil but act as systemics, meaning they are taken up by a plant into its leaves to kill pests attacking the plant. Granular pesticides are sometimes applied to bodies of water to kill larval mosquitoes and other aquatic pests.

Advantages to Granular Insecticides:

Packaged ready to use; no mixing needed

Low drift hazard compared to dusts and sprays due to the heavier particles

Low hazard to applicator compared to dusts and sprays

Can be applied through foliage and will drop to the ground below

Application equipment is simple (seeders, lawn spreaders, or hand-held shakers)

Disadvantages to Granular Insecticides:

Do not stick to foliage if foliage is the treatment site

May be more expensive than other formulations

May need to be incorporated into the soil by watering or raking

[In the next issue, *Granular Insecticides - Part II, Application Methods*]

Hardwood or Softwood? - Knowing Makes a Difference

Beetles, wasps, bees, and other pests attack wood. Knowing whether infested wood is softwood or hardwood can help eliminate certain pests from consideration. For instance, if the wood damaged is oak, you can rule out old house borer since it attacks only softwoods and oak is a hardwood. If the wood is pine, which is a softwood, you can rule out lyctid powderpost beetles since they attack only hardwoods.

Hardwood is the wood of a broad-leafed tree. Hardwood trees grow rapidly in the spring forming a light-colored band of large, thin-walled vessels or pores, called springwood. Lyctid powderpost beetles only infest certain hardwoods because the female beetle needs large pores in which to lay her eggs. When growth slows in the summer, the cells are more closely packed forming the darker summerwood portion of an "annual ring." Hardwood trees generally lose their leaves in the winter.

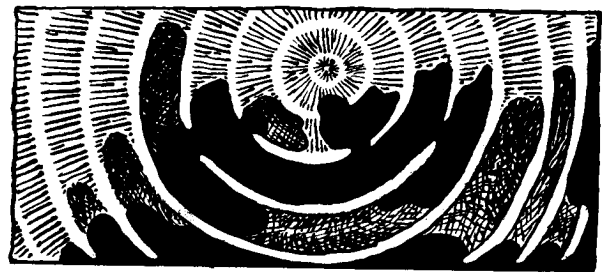
Softwood usually refers to wood from a tree with needles and cones. Softwood trees usually keep their needles year-round. Softwoods like pine have a more uniform growth without large springwood pores, so annual rings are much less noticeable.

Although the terms hardwood and softwood don't refer directly to the hardness of the wood, in general softwoods are lighter in weight and easier to cut. Softwoods are used most commonly in building framing and other construction. Because hardwoods have a nicer grain pattern when cut, they are used more often for finishing work like flooring, paneling, and furniture.

Common native hardwoods - ash, aspen, basswood, birch, cherry, elm, hickory, oak, pecan, poplar, maple, sweetgum, walnut

Exotic hardwoods - bamboo (technically a grass, but classified as a hardwood), banak, luan/meranti, mahogany, obeche

Common softwoods - fir, hemlock, pine, redwood, spruce



Termites feed on the softer springwood, avoiding the rings of harder summerwood

Tips for Eliminating That Last Elusive Rat

Consultant Dr. Robert Corrigan has some tricks and tips to help remove that one last wily rat that hasn't responded to all your previous efforts. Many of these tips are ways that you can overcome the rat's neophobic behavior, in other words, the rat's fear of any new foods or objects in its territory.

Whenever possible, remove the suspected food source of the rat -- even if just for one night. With the food source gone, the rat no longer has the option of ignoring your new bait in favor of what it has been feeding on.

Offer gourmet foods -- That rat could finally be enticed to a bait station or trap by offering a special delectable food treat like fresh meat, fish, or shrimp.

Precondition the rat -- Place small pieces of food on both sides, next to, and on top of an unset trap. Once the rat associates the food with the new trap, you can then set the trap. For bait stations, smear a small amount of food around the entryway and on the underside of the bait station's roof.

Try natural food baits -- The rat's neophobic (fear) response to new baits might be overcome by offering the rat one of its natural foods such as cockroaches for Norway rats, or slugs or snails for roof rats. Tie these baits to the trigger using dental floss.

Make use of the rat's scarcest resource -- The rat may have plenty of food available but no water. In this case, switch to liquid baits. There may be a shortage of nest material for a pregnant female rat. In this case, tie strips of cloth or cotton balls to the trap's trigger.

Try tracking powders -- Tracking powder is especially useful against neophobic rats since the rats don't know to avoid it. Apply it in suspected runways, possible burrow openings, and other areas where the rat may travel.

Go high tech -- Install a video camera with a low-light option in those areas where your elusive rat is active. The camera may record the rat's behaviors and provide clues needed to trap the rat. Or, consider the use of a thermal imaging device to detect the heat given off by the rat or its nest, especially if it's in a hard-to-reach area. These devices are expensive but if your rat is causing damage in a sensitive site such as in a plane or museum, it may be worth the expense.

Finally, hire a sharpshooter -- This is not as farfetched as it sounds. A sharpshooter lying in wait at night to take out that last troublesome rat can be one of the most cost-effective approaches in sensitive sites.

[Source: *Rodent Control: A Practical Guide for Pest Management Professionals*, Robert M. Corrigan, GIE Media, 2001.]

Techletter® (ISSN 0883-8828) is published biweekly by Pinto & Associates, Inc.
155 Oak Road • Mechanicsville, MD 20659-2201 USA • Phone: (301) 884-3020 • Fax: (301) 884-4068
Publisher: Lawrence J. Pinto Editor: Sandra K. Kraft
Subscriptions are \$52 U.S. per year for subscribers in the United States; \$60 U.S. in Canada and Mexico.
Subscriptions outside these countries are \$73 U.S. per year, delivered airmail.
Back issues available at \$3.00 each.