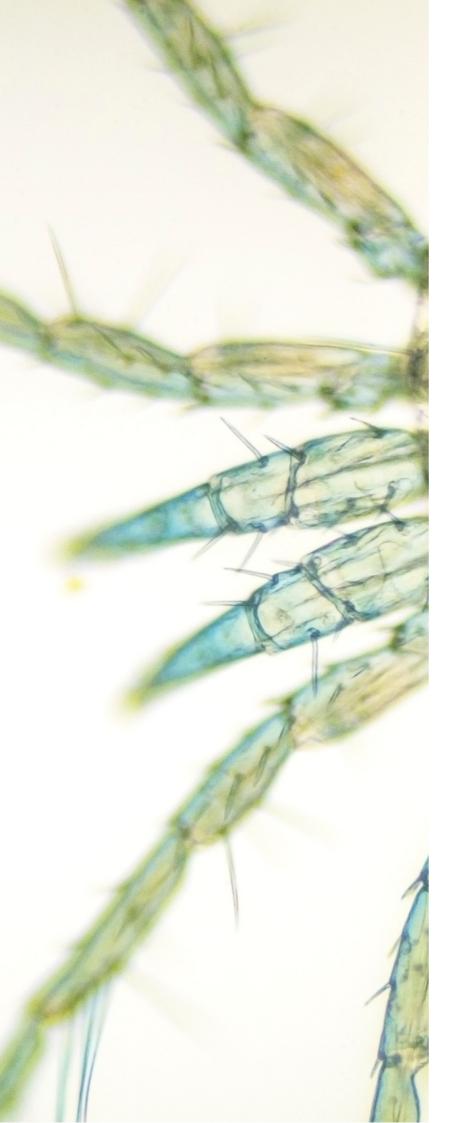




# THE STERIFAB GUIDE TO MITES

"There are between 3 and 5 million species of mites, and that is a very conservative number. Almost every beetle will have a mite. Almost every single plant has one to three mites. The soil has mites. The ocean has mites. Humans have mites. Every mammal has mites."

- Ron Ochoa, U.S. Department of Agriculture - Systematic Entomology Laboratory



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A pinprick on a sheet of paper is large enough for a mite to crawl through.

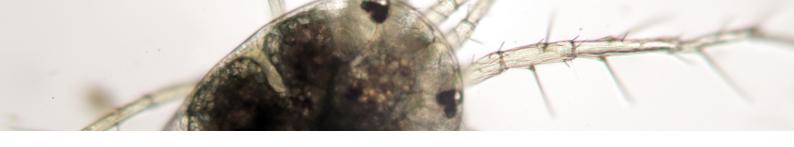
#### AN INTRODUCTION TO MITES

Don't be alarmed, but mites are everywhere. They're on your face, your hands, the keys of your computer and your clothes. Since they're so common, you might expect that everyone would know something about them, but the truth is that mites are so incredibly small (less than 0.04 inches long) that most of us never notice them. We only start to learn about these ubiquitous creatures when they become a nuisance-or a threat to our health.

Despite their distinctly insect-like appearance, mites are actually arthropods, closely related to spiders and ticks. They come in all sorts of (small) sizes and survive in a variety of diverse, often ingenious ways. Some are parasites, some feed on plants, others are scavengers, but many of them live off insects and other arthropods. The vast majority of mite species rarely come into contact with humans, but the ones that do aren't always benign.

Among the millions of species of mites, here are 9 you should be aware of:

- 1. Scabies Mites
- 2. Itch Mites
- 3. Dust Mites
- 4. Bird Mites
- 5. Chigger Mites
- 6. Clover Mites
- 7. Velvet Mites
- 8. Hair Follicle Mites
- 9. Rodent Mites



#### TYPES OF MITES

### Scabies Mites

Probably the best-known and least pleasant member of the mite family, scabies mites burrow under the skin and create 'tunnels' (usually about a centimeter long) just below the skin's surface where they lay their eggs. Almost all human infestations are a result of person-to-person contact, and these critters are highly contagious.

## 2 Itch Mites

Itch mites almost always prey upon insects but if they detach from their insect victims, they can bite other animals, including humans. While you probably won't feel them bite, they can cause itchy red marks that resemble a rash. Fortunately, itch mites are unable to live on humans and cannot survive life indoors.

## 3 Dust Mites

These mites are practically invisible to the naked eye due to their translucent bodies and extremely small size. They do not bite, but their fecal matter can become airborne. People who say they are allergic to 'dust' are actually allergic to dust mites (and dust mite feces), leading to a number of symptoms like sneezing, a runny nose, itchy, red or watery eyes, nasal congestion, an itchy nose, roof of mouth or throat, a cough and/or facial pressure and pain. Note: Dust mites are very rarely responsible for the skin irritation that people incorrectly attribute to them.

## 4 Bird Mites

There are many kinds of bird mites, but the two main species in North America are the red mite and the northern fowl mite. Bird mites are extremely resilient; they can survive for a long time without a host and endure temperatures as low as -4 degrees Fahrenheit. While they need bird blood to survive, these pests can also be found on rodents and bites on humans can cause itching and take a considerable amount of time to heal.

## **5** Chigger Mites

Chiggers have not been known to transmit diseases to people, but their bites can be quite itchy and can cause allergic reactions or blister-like wounds. Chiggers feed at the base of hair follicles or pores. They commonly attach themselves to areas of the human body where clothing fits more tightly, e.g. at the waistline or the sock line. Most people encounter chiggers while working outdoors or walking in the woods or tall grasses.

## 6 Clover Mites

Clover mites do not bite and aren't known to cause health-related problems in humans or pets. Instead, they feed on plants, making them a particular threat to gardens. However, these mites can cause a fright indoors! They are easily mistaken for tiny red spiders and have been known to invade in the thousands. (Not a welcome sight.)

## **7** Velvet Mites

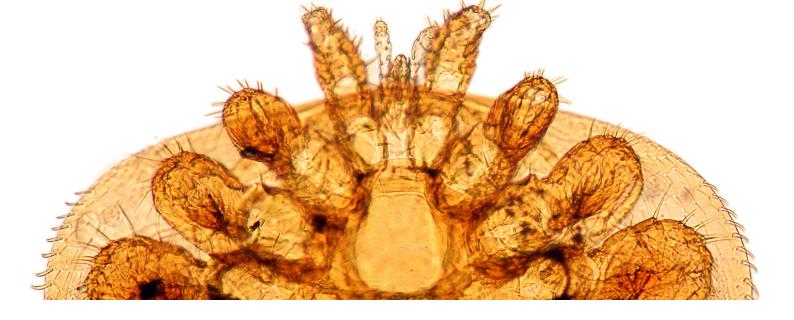
There are thousands of species of velvet mites, all of which live in the soil where they lay between 50 and 100,000 eggs at a time. Because velvet mites feed on the blood of insects, they help keep other pest populations in control. While they are harmless to human beings, they are visible to the human eye and can cause some concern if a large number of them hatch in your home.

# **8** Hair Follicle Mites

Hair follicle mites are invisible to the naked eye but, as their name suggests, they can be readily found in your hair. These mites burrow into ears and eyelashes as well as in facial skin, particularly on the forehead, cheeks and the side of the nose. Though generally harmless, in large enough numbers, they have been associated with a number of skin problems like eczema, and/or rough and scaly skin.

### **Rodent Mites**

Turns out that rodents can be afflicted by their very own species of mites, most of which are harmless to humans. The house mouse mite, however, can cause rickettsialpox in humans. Fortunately, this bacterium is rare in North America, although there have been a few cases reported in the Midwest.



#### WHEN MITES BITE

You may not know you've been chomped on...until you notice the bites.

#### How to Identify Mite Bites

While bites can look different depending on the species, mite bites share certain characteristics. These include:

- 1. Red marks on the skin which can look like a rash
- 2. Little lumps that become hard and sometimes irritated
- 3. Itching and pain in and around the bite site
- 4. Inflamed or suppurated skin close to the bite



#### How to Identify Mite Bites (continued)

Here are some more specific bites to be aware of:

- Bird mite bites itch and often seem like mosquito bites, but take longer to heal.
- Chigger bites create an itchy red welt. Scratching can lead to infection and fever.
- Some people are allergic to clover mites, though they rarely bite people.
- Scabies bites look like a rash and should be diagnosed quickly, as these mites lay their eggs in your skin in what look like grayish-white, raised lines. The resulting offspring also bite and breed, spreading quickly around your body.
- Itch mite bites resemble chigger bites, but are rarely found on human legs. They typically itch and develop into a pimple-like laceration.
- Dust mites don't bite, but are so numerous that their skin and feces are often inhaled, which can cause asthma attacks and an allergic reaction similar to eczema, as well as flu-like symptoms and eye and throat irritation.
- Though invisible to the naked eye, large concentrations of hair follicle mites can create itchy or scaly skin, burning sensations or even eczema.

Rodent mite bites can lead to rickettsialpox, a condition that begins with a section of dead skin after which a small papule develops and eventually turns into an ulcer with a dark crust, accompanied by fever.

#### THE DANGERS OF MITES

#### Mites are everywhere and most encounters are harmless, but not all...

#### Why Mites Can Be Dangerous

Clearly, mites are more than a nuisance. Despite their miniscule size, mites can make their presence felt through their bites, which can itch, be used as a hatchery for more mites and even cause fever.

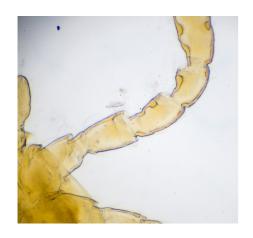
But mites are at their most dangerous when spreading disease. Though their tick cousins are more commonly associated with spreading harmful illnesses to humans, mites are also known to transmit the bacteria that cause lyme disease and scrub typhus.

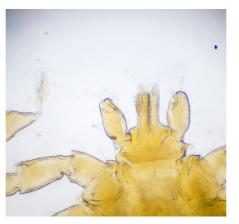
#### Lyme Disease

While lyme disease is normally treated successfully with a few weeks of antibiotics, it is sometimes misdiagnosed, as doctors usually judge based on symptoms and the likelihood a patient came into contact with ticks.

Lyme disease can result in a distinct rash or swollen lymph nodes as well fever, chills, headache, fatigue, muscle and joint aches just a few days after contraction. Left untreated, lyme disease is even more dangerous in the long term, and can lead to a wide variety of ailments including arthritis, facial palsy, inflammation of the brain and spinal cord, and heart palpitations.









#### Why Mites Can Be Dangerous (continued)

#### Scrub Typhus

Spread by mites in the larval stage, scrub typhus causes fever, body aches and enlarged lymph nodes. It can also impact brain function, causing symptoms from confusion to coma. At its most severe, scrub typhus can lead to organ failure and bleeding, and can be fatal if left untreated.

Scrub typhus is quite rare in North America, but travelers to Southeast Asia, Indonesia, China, Japan, India and northern Australia should protect themselves accordingly.

#### **HOW TO GET RID OF MITES**

#### Regardless of the species, mites have the ability to proliferate rapidly.

#### How to Get Rid of Mites - On Your Own

Because mites are so small and hard to detect, it can be tough to take action before they become a problem.

If you have a problematic infestation, here are 5 steps you can take to get rid of mites:

- 1. Get rid of clutter. Newspapers, magazines, empty cardboard boxes, old clothing and anything else unnecessarily collecting dust could be a breeding spot for mites and should be thrown out.
- 2. Clean regularly. Mites make their home anywhere they can, including bedding, carpets, air ducts, dusty attics and even lampshades. A thorough weekly cleaning will make sure you're eliminating as many harmful mites as possible.
- 3. <u>Buy dust-proof covers for your beds, mattresses and pillows</u>. Beds are usually host to the highest concentration of mites, so enclosing mattresses and pillows in dustproof covers is always a good idea.
- 4. Wash bedding in the hottest water possible. Mites love bedding and other fabrics. As soon as you know you have a problem, wash your bedding, pillowcases, curtains, blankets, throws and coverlets in the highest temperature setting on your washing machine.
- 5. <u>Disinfect areas that harbor mites</u>. Obviously, you want to select a product that is both safe and reliable. There are many on the market, but your best bet is to use something that functions as both a disinfectant and a pesticide. Sterifab® is the only EPA-approved insecticide and disinfectant all-in-one.





Sterifab not only eradicates mites but also gets rid of a host of other insects.

#### Why Choose Sterifab to Get Rid of Mites?

In addition to killing mites, Sterifab:

√ Sanitizes and keeps odor-causing organisms in check.

√ Can be used safely on mattresses and upholstered furniture.

Dries quickly (15-20 minutes) and leaves no residue.

Plus, it is the only U.S. EPA-registered product that works, simultaneously, as a viricide, bactericide, insecticide, deodorant, germicide, disinfectant, fungicide, bacteriostatic, and fungistatic.







