STORY AND PHOTOGRAPHY BY DOUGLAS A. SPILKER, PH.D.

Spider Mites

Spider mites can be a serious pest in the landscape —although they are tiny, their damage can be a big deal.

The thought of spider mites can bring chills to an avid gardener, rekindling memories of the damage inflicted to a favorite plant by tiny creatures you can hardly see. Of all the pests in the urban landscape, spider mites are probably the most difficult to manage. They are periodic pests of an extensive list of trees, shrubs, and flowers, attacking both evergreen and deciduous plants. They are not insects but are more closely related to spiders; therefore, management options by homeowners are limited. Their common name is derived from the ability of most species to produce silken webs on host plants. Because mite populations tend to be explosive, infestations often go unnoticed until plants are already showing significant damage. The two-spotted spider mite and spruce spider mite are the most common pests.

Two-spotted spider mite feeding results in yellow or white flecking on upper leaf surfaces, usually the first sign of an infestation.

Spider Mites Are Very Tiny — Period

Spider mites are very tiny, about the size of the period at the end of this sentence. Mites have needle-like mouthparts for penetrating plant tissues, and are found primarily on the undersides of leaves. Their feeding results in yellow or white flecking on upper leaf surfaces, usually the first sign of an infestation. With heavy mite feeding, the foliage takes on a silvery or bronzed cast. Web-producing spider mites can smother the foliage with a fine silk, which collects dust and makes the plant look dirty. Under favorable conditions, spider mite populations quickly build, causing premature leaf drop, poor plant growth and potentially the death of infested plants. Under optimum conditions some mites can complete a generation in as little as a week.

Spider mite species seem to be warm-weather- or cool-weather-active pests. The two-spotted spider mite is a "warm-season" mite, doing best in the dry, hot summer weather. It is most commonly found damaging winged euonymus and viburnum species, as well as perennial and annual flowers. The spruce spider mite is a common "cool-season" mite, thriving best in cool spring or fall weather. This pest infests all types of conifers, especially spruce and pine trees, junipers and arborvitae shrubs. Conifers often react slowly to mite feeding. Yellowing and bronzing of the needles may not be seen until summer, even though the damage may have occurred the previous spring.

Managing Spider Mites

Spider mites threaten the health and appearance of your plants. Early detection of spider mites, before damage occurs, is important. To check for spider mites, hold a sheet of white paper under a branch and tap the branch sharply. If present, mites will fall off and be seen as tiny specks crawling over the paper. If crushed, most plant-feeding mites will produce a green streak.

Before selecting a pesticide option, try to reduce your mite problem by hosing down your plants with a steady stream of water every day for a week or so. In addition to physically dislodging mites by "syringing," populations are less explosive under these moist conditions that promote a fungal disease of the mites. Of course, wetting foliage in this manner also increases the potential for plant disease. If you still find large numbers of mites on your plants, reduce spider mite problems and conserve natural enemies in the home garden by using the least toxic materials available. The natural enemies in your home garden are your most important weapons against spider mites.

(Above) As spider mite infestations expand, it is not uncommon to see silken webs enveloping plants — especially perennial plants such as these columbines.

Chemical Control Using 'Soft Pesticides'

If a treatment is necessary, use insecticidal/miticidal oils and soaps. Both petroleum-based horticultural oils and plant-based oils such as neem, canola or cottonseed are available to homeowners. These can be used on perennial and woody ornamentals during the summer but avoid spraying flowers, which can be damaged. Do not apply soaps or oils on water-stressed plants or when temperatures exceed 90 F. Since soaps and oils work by contact only, thorough coverage of the upper and lower leaf surfaces is necessary for good control. For control of heavy mite infestations, especially on high-value plants, you may want to consider hiring a professional applicator since they have access to more specific miticides than is available to homeowners.

Two-Spotted Spider Mites

The two-spotted spider mite is often introduced on infested bedding and houseplants, so the first principle of spider mite management is prevention. When purchasing new plants, carefully inspect the lower leaf surface for any signs of pests, especially mite webbing. It is always best to quarantine new plants for a few days until you are sure that no mites are present.

With a little knowledge and vigilance, keep mites away; no one likes to recall the nightmares that spider mites can cause.

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Spider mite populations can easily spread down a row of susceptible shrubs such as burning bushes (*Euonymus alatus*).

'Mite' They Be Attacking Me?

Although spider mites only attack plants, the oak leaf itch mite causes itching and painful, small, raised bites on humans. These mites commonly feed upon other insects, but drop from oak trees especially when food sources are scarce late in the season. These bites are usually found on the upper body at the neck, shoulder and chest area. Little is known about how to control these mites, and repellents have shown little effect against them. With increased fall gardening activities, especially raking leaves, reduce time spent under or near infested oak trees and wear long-sleeved clothing, a hat and gloves to reduce potential exposure. The season's first frost is likely to bring an end to the oak leaf itch mites.