

Home Grounds Fact Sheet

Mites

Introduction

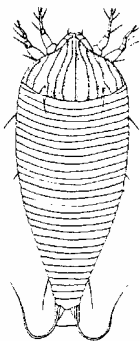
While mites belong to the same phylum as insects, they are more closely related to ticks and spiders and are part of the arachnid class. They have no antennae and they have 2 (erriophyid)-4 (all others) pairs of walking legs. They are very, very tiny. Mites basically have two lifestyles: within galls or blisters and free living. Mites are serious pests of many different plants. The most effective control of small outbreaks is often by predaceous mites and lady bird beetles. Bear in mind that chemical applications may lead to more mite outbreaks or to suppression of beneficial insects as well. Make sure the pest is correctly identified before any action is taken.

Integrated Pest Management (IPM) Considerations

IPM is a common sense approach to pest control and plant care. It employs a number of measures to prevent, control or reduce plant problems. These include using resistant plant varieties, proper plant selection and placement, good aftercare and biological and/or mechanical controls. As a last resort, after all other remedies have been explored, a pesticide* that is least toxic to people and natural predators, can be considered. Prior to using any pesticides, plants should always be monitored for the degree of infestation and a sensible control measure considered.

* A pesticide is a substance that kills, or attempts to kill, a particular pest, e.g. **insecticide**, **fungicide**, **herbicide**, etc.

(greatly enlarged)



dorsal view



ventral view

Eriophyid Mites

Mites living within galls or blisters are called eriophyid mites. They are elongate and have only two pairs of walking legs. Common signs of damage include pouch or blister galls on leaves, bud injury or rusty looking foliage produced by tiny, needle-like mouth parts. Under the microscope, these mites look like tiny peeled pears or orzo with legs.

Privet rust mites can cause a rusty discoloration, premature leaf drop, silvery stippling and downward cupping of leaves. This mite prefers cool weather with greatest populations occurring in spring and fall, becoming active as soon as new leaves develop from the buds. Overwintering females migrate from beneath bark to lay eggs on new leaves.

Control: Predaceous mites are the most effective natural enemy. Other control options include horticultural oil applied from the last ten days in May through mid-June, 298-802 GDD*, and again in mid-July, 1266-1515 GDD. (see note A.)

Hemlock eriophyid mites cause blue, followed by yellowish foliage and needle drop. They feed openly on the needle surface causing chlorotic, dwarfed or distorted needles and partial defoliation.

Control: Dormant sprays with horticultural oil may be effective for control. (see note A.)



Taxus bud mites are occasionally a serious pest of yews, particularly on Long Island, causing blasting and death of buds. Adults overwinter between bud scales. Feeding occurs during late summer and fall, with bud decay due to invasion by secondary microorganisms. There may be up to 1000 mites in a single bud. Heavily infested buds don't grow in the spring and lightly infested bud growth is distorted. New buds are infested in the summer through migration.

Control: (see note A.)

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Free-living Mites

Free-living mites include harvest mites (chiggers are a member of this family), spider mites, false spider mites, and acarid mites among others. These mites do not produce galls. Predaceous mites, thrips and lady beetles are important natural predators. Unfortunately, control measures are often applied too late to control mites and instead make harmful inroads in predator populations.

Two spotted spider mites are very common mites with multiple generations each year. These mites occur on many different kinds of plants.

Spider mites have needle-like teeth which rupture cells of leaf tissue. The mite shoves its mouth into the groove while the teeth probe deeper. This action produces the stippling and flecking so characteristic of mite damage. These areas may coalesce, creating characteristic bronzing on the leaves.

Cast skins and webbing are also common signs. Dust and dirt on foliage seem to favor outbreaks. These mites are most active in the spring. Two spotted spider mites are one of the most serious greenhouse pests world wide. They are most active on the undersides of leaves causing tough, dry foliage from extensive feeding. Plants may be stunted by high populations.

Control: Heavy irrigation of foliage, if the plants can take this without damage, may be an alternative to chemical control. Control options for trees and shrubs include multiple predators, insecticidal soap, or horticultural oil. (see note A.) On raspberries, two-spotted spider mites can be suppressed by applying sulfur (80% WP) according to label directions for powdery mildew. Control on other small fruits can be attempted through thorough clean up during strawberry bed renovation or by using a stream of water directed at the undersides of leaves to remove mites from small plantings. Monitor your plantings for the presence of mites and try to remove infested crowns or canes before the problem spreads.



The **spruce spider mite** is extensively reviewed in Home Grounds Fact Sheet E-1-20.

* GDD - Growing Degree Days - Home Grounds Fact Sheet E-1-0.

note A. Chemical pesticides are available. If you choose to use chemical pesticides, contact your local Cooperative Extension office for specific recommendations.

