



# Entomological Notes

Department of Entomology

## SPRUCE SPIDER MITE

*Oligonychus ununguis* (Jacobi)

### INTRODUCTION

The spruce spider mite is considered one of the most destructive spider mites in the United States. It injures the foliage of spruce, arborvitae, juniper, hemlock, pine, Douglas-fir, and occasionally other conifers. Dwarf Alberta spruce, *Picea glauca* 'Conica', is one of this pest's preferred host plants.

### DESCRIPTION

After hatching, the young, pale green mites called larvae resemble adults except they are smaller and have only three pairs of legs. As the mites mature, they shed their skins three times before becoming adults. Adults and nymphs have four pairs of legs and are dark green to nearly black with the body surface clothed with salmon pink-colored spines (Fig. 1). The adult's legs are also salmon pink.

### LIFE HISTORY

This key pest overwinters as brown eggs tucked in and around bud scales and at the base of needles. These hatch in the spring, usually before new growth starts. A generation from egg to adult may require 15-20 days and generations frequently overlap so that all stages may be found on host plants during late spring and early summer. There are 7-10 generations produced each year.

### DAMAGE

This species damages host plants by sucking plant fluid from needles as they feed. Infested trees at first have a speckled, yellowish appearance, and lack rich green color. After prolonged feeding, needles turn rusty colored and may drop prematurely. Mites usually attack older needles located in the lower and inner parts of the plant. Damage may spread as the season progresses. This species also produces silken webs on the needles.

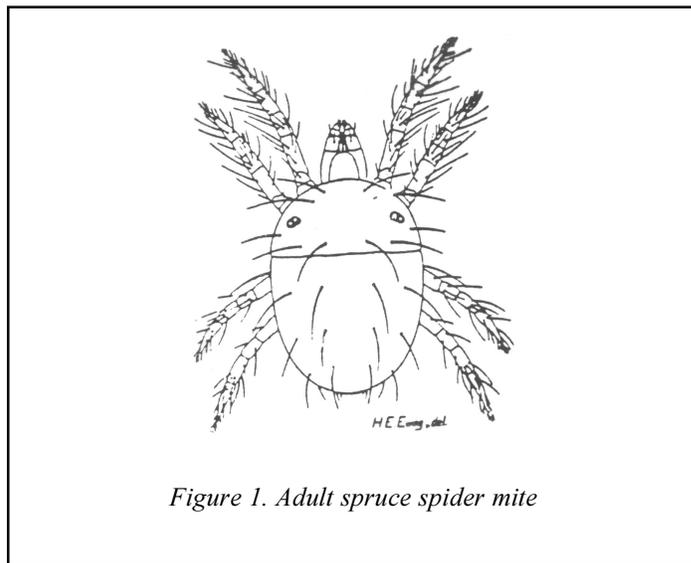


Figure 1. Adult spruce spider mite

### MANAGEMENT

#### Monitoring

When plant foliage begins to show off-green, or stippled, color and spider mites are suspected, perform a foliage check. Take a piece of white paper, hold it under a branch suspected of having mites, and strike the branch hard against the paper. This should dislodge the mites, and even though they are only 0.5 mm long, you should be able to see the dark, oval spider mites against the white background. Examine three to four places around the plant. If you dislodge ten or more mites at each site, it would be advisable to apply a registered miticide according to label directions.

This species is sometimes referred to as a cool season pest. The best time to treat spruce spider mite infestations is in early to mid-May, and again in early September if needed. Repeated applications are sometimes needed to keep mite populations in check. Apply registered miticides only to plants specified on the label. Remember, mites may develop resistance to certain chemicals used against them, so it is necessary to switch to another class of miticide after every third application. Also, mite populations may increase following the use of certain insecticides. Therefore, it is a good idea to add a miticide when spraying mite-susceptible plants with insecticides.

## **WARNING**

Pesticides are poisonous. Read and follow directions and safety precautions on labels. Handle carefully and store in original labeled containers out of the reach of children, pets, and livestock. Dispose of empty containers right away, in a safe manner and place. Do not contaminate forage, streams, or ponds.

Gregory A. Hoover  
Sr. Extension Associate  
Dept. of Entomology  
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