

Colorado Insect of Interest

Poplar Scale (Aspen Scale, Willow Scale)

Scientific Name: *Diaspidiotus gigas* (Thiem & Gerneck)

Order: Hemiptera (Aphids, Scales, Whiteflies, Leafhoppers, Cicadas, True Bugs, etc.)

Family: Diaspididae (Armored Scales)



Figure 1. Poplar scales.

Identification and Descriptive Features: The poplar scale has a circular scale cover, approximately 1.7-2.8 mm in diameter. It is gray with an orange-yellow center. Males produce an elongate oval covering and are smaller than females. The exposed body of the female is light yellow.

Distribution in Colorado: Poplar scale is an introduced species, native to Eurasia. However it is widely distributed throughout western Colorado and is occasionally encountered along the Front Range. It is apparently limited to trees within towns and has not yet been found in natural areas. It does occur in some native aspen groves in Idaho.

Life History and Habits: Poplar scale has been found associated with aspen and narrow-leaf cottonwood in Colorado. Other *Populus*, along with certain *Salix* and *Tilia*, are also reported as hosts. Infestations on aspen typically occur on the trunk and larger branches, which produce a characteristic bubbling symptom on bark. Decline and some death of aspen has been associated with this insect in Colorado with street trees and trees in poor sites particularly susceptible.



Figure 2. Overwintered Instar II poplar scales on aspen trunk.

The life history of this insect in Colorado is incompletely known. Reports for Europe and China indicate that it has a single generation per year, with the insect overwintering in the second instar. Development continues the following spring with mating occurring in late spring. A clutch of eggs is initially produced but egg production can subsequently continue for weeks. The peak period of egg hatch/crawler activity is in early summer.

However, in Colorado adult activity and egg hatch has also been observed in late winter and early spring. This suggests that at least some spend winter as a mature adult and that a second generation may be present.

Associated Species: Also common on aspen is oystershell scale (*Lepidasphes ulmi*). This species produces an elongate brown or gray-brown covering and infestation on trunks may result in vertical bark cracking.

Similar Species: At least two other scales found in Colorado also have a rounded scale cover that superficially resembles that of the poplar scale. The San Jose scale, *Quadraspidiotus perniciosus*, is most often found in crabapple and other fruit trees. The walnut scale, *Quadraspidiotus juglansregiae*, has been found most often on linden.



Figure 3. Mature female poplar scale exposed from under scale cover. Photograph by Bob Hammon.



Figures 4, 5. Bark bubbling symptom associated with poplar scale infestation on aspen trunk.