

Pinyon Needle Scale

Scientific Name: *Matsucoccus acalyptus*
(Herbert)

Order: Hemiptera (True Bugs, Aphids, Scale Insects, Hoppers, Cicadas, etc.)

Family: Margarodidae (Margarodid Scales)

Identification and Descriptive Features: The stage most commonly observed are the second instar nymphs, often described as the “bean stage”, found attached to needles in early spring. Adult females that subsequently are produced are black, armored, mobile scales, about 1/16 inch long that migrate to the trunk where they produce a cottony mass of eggs in spring. Adult males, present in early spring, are winged, fly-like, and rarely seen.

Distribution in Colorado: Southern Colorado in association with its host, pinyon (*Pinus edulis*).

Life History and Habits: Pinyon needle scale overwinters attached to needles as a second instar nymph; this stage is legless and resembles a small, black bean (“bean stage”). They resume development in early spring, enlarging considerably and ultimately molting to a mobile adult form. Winged males appear at this time and mating occurs in early April.

The females crawl to the branches and trunk, often aggregating at branch crotches and the underside of larger branches. There they lay a small mass of yellow eggs that are covered in white cottony wax, which can be quite conspicuous on heavily infested trees.

Eggs hatch around mid-May and the newly hatched nymphs settle on the previous year needles. The second stage is formed in late summer and overwinters attached to the needle. There is one generation per year.



Figures 1, 2. Pinyon scale bean stage (top). Pinyon scales settle and do most development on the previous year needles. (bottom).



Figure 3. Pinyon scale egg masses on pinyon trunk.

Feeding by adult females and nymphs causes needles to turn yellow and prematurely fall. Most defoliation occurs on older needles with younger needles typically persisting. This produces an overall sparse, somewhat grayish appearance to the trees. Repeated yearly attacks can significantly weaken trees, increasing their susceptibility bark beetles and other stressors.



Figure 4. Thinning crowns and discolored foliage indicate advanced infestations of pinyon needle scale.