

# **What is the Fastest Way to Remove Scale from My Trees?**

By Adam Blalock

The first thing that comes to mind for most people when they hear the word “scale” is either the instrument used to measure weight or the hard little plates that cover snakes and lizards. However, to a horticulturist, the word “scale” usually brings up not so fond memories of past efforts trying to eradicate little sucking armored insect pests. There is a reason most horticulturists cringe when they discover they have a scale infestation – they are notoriously difficult to control with conventional methods.

There are around 7,300 scales and scale-like insect species known<sup>1</sup> which means just about every plant species we grow is a host to at least one type of scale. One of those scales has, over the last several years, made itself at home in middle Tennessee: the Japanese maple scale (JMS).

There are a couple of reasons why JMS has become so prevalent in many areas of the country. First JMS is a generalist, able to infest many different tree species. Second, with field grown nursery stock, trees are often left untouched for several years as they grow and mature. A single JMS will lay around 25 eggs<sup>1</sup> and, in Tennessee, this has been reported to happen twice per year, once in late spring and once in late summer. This means that in five years, a few individual unseen scales could explode into an epidemic.

Increasing scale populations could also be the result of an absence of an annual dormant oil spray. In several studies, a thorough dormant oil spray in late fall or late winter provided nearly 100% control. Oil sprays can also reduce the severity of some diseases and leaf spot causing fungi.

If you have been unfortunate enough to find a scale infestation, there is hope. However, in horticulture or agriculture, using one method for control is rarely effective for long. A late winter dormant oil spray might be 99% successful but another control method is required for the remaining 1%. For this complementary treatment, insect growth regulator insecticides like Distance® or Talus® are effective when applied after the scale eggs have hatched. Each scale species has its own hatching time but JMS hatchings happen in late May into June and again in August in Tennessee. To determine if the eggs have hatched, look for the crawlers (juveniles) by wrapping a branch with double-sided sticky tape or rub a thin layer of petroleum jelly over the tape.

Another problem when dealing with scales is that their hard armored shells will remain attached to the plant even after it has died. These old scale shells can only be removed using physical means like hand rubbing or pressure washing. The old scale shells will weather and fall off over time but it can take several years. To determine if the scale is truly dead, squish a few with a pen or the tip of your fingernail. For JMS, if they squish and release purple goo, they are alive, if they are dry and crunchy, they are dead.

Scales are their own problem, by which I mean they must be managed like scales, not another type of insect. Control takes a proactive approach and a habit of scouting for scale before they could potentially get out of hand. Simply following these easy practices of scouting and applying dormant oil, your trees will remain scale free for the entire production cycle.

<sup>1</sup> Miller and Davidson, 2005. Armored Scale Insect Pests. p1, p276. Comstock Publishing Associates. Cornell University Press.