A gentleman just brought leaves in from an old pear tree wondering why his tree was almost leafless. The leaves were sticky and had tiny insects clustered on the veins. I looked at the leaves under the stereoscope and found pear psylla nymphs of various growth stages.

Pear psylla look like tiny cicadas. They only reproduce on pears, but may feed or overwinter on apples and other fruit trees. They have piercing-sucking mouthparts. They are carriers of a viral disease that causes pear decline. They go through five stages of growth (instars) before becoming an adult. During the first four stages, they are completely covered in honeydew – a sticky byproduct of their feeding. In the final instar before becoming an adult, they are dark with prominent wing pads (under a hand lens or scope). They start laying eggs as the pear buds begin to swell. Multiple generations can occur each year.

Damage can include fruit spotting or “russetting,” psylla shock due to large numbers of pests and the disease, pear decline. The tree becomes unhealthy through the transmission of a disease organism the psylla inject into the tree. Black sooty mold often develops in the honeydew on the leaves, reducing the trees’ ability to produce food through photosynthesis. Psylla feeding can also cause leaves to blacken, to yellow or to fall off. Trees can be damaged for one or more seasons.

To control pear psylla, apply dormant oil once or twice during late winter before the tree breaks dormancy. It is very important to kill the overwintering adults. It may also be necessary to apply a summer weight horticulture oil two to three times during the growing season. Oils smother the insects. Psylla control with insecticides is challenging because they quickly develop a resistance to insecticides, and not all stages are susceptible to chemicals. Insecticidal soaps and products containing azadirachtin can reduce psylla populations.

If you are thinking of planting pear trees, select varieties and cultivars that are less susceptible to psylla damage. ‘Bosc’ and other russeted cultivars suffer less fruit damage than smooth skinned pears. Psylla are more often a problem on European rather than Asian varieties.