

European Elm Flea Weevil **Insect Pest of Elm Trees**

The European elm flea weevil, *Orchestes alni*, is an insect pest of elm trees. The larvae and adults feed on leaves, which can reduce the aesthetic appearance of elm trees. American, *Ulmus americana*; Chinese, *Ulmus parvifolia*; and Siberian, *Ulmus pumila*, elms, as well as certain elm hybrids with Asian parentage, are susceptible to feeding by the European elm flea weevil. This publication provides information on the biology and behavior, and damage associated with European elm flea weevil, and recommendations for management.

Biology and Behavior

European elm flea weevil larvae are approximately 1/8 of an inch (3.0 millimeters) long, cream-colored, legless, and wrinkled (Figures 1 and 2). In the spring, larvae are located within mines or tunnels in the leaves (Figure 3). The larvae feed for several weeks, then they pupate within the mines or tunnels. Adults emerge (eclose) in spring through summer in Kansas.



Figures 1 and 2. European elm flea weevil larva (Photos: Raymond Cloyd).



Figure 3. Mines or tunnels created by European elm flea weevil larvae (Photo: Raymond Cloyd).

European elm flea weevil adults are approximately 1/8 of an inch (3.0 millimeters) long, red-brown, with black spots or markings on the abdomen (Figure 4). Adults have chewing mouthparts located on the end of a snout-shaped structure protruding from the head (Figure 5). The large hind legs allow adults to jump when disturbed. Adults are active in spring and summer. After mating, females lay eggs on the underside of new leaves. Adults overwinter under bark and in leaf litter located under previously infested elm trees. There is one generation per year in Kansas.

Damage

Larvae emerge (eclose) from eggs and tunnel through the leaf as they feed. When feeding, the larvae make serpentine mines or tunnels in leaves. The larvae eventually move to the leaf tips where they make blotched mines or tunnels resulting in leaf distortion (Figure 6). Adults feed on leaf undersides creating



Figures 4 and 5. Adult European elm flea weevil (left) and snout-shaped mouthparts protruding from the head (right) (Photos: Raymond Cloyd).



Figure 6. Blotched mines or tunnels on the leaf tips associated with the European elm flea weevil larvae feeding result in leaf distortion (Photo: Raymond Cloyd).

small holes in young leaves that resemble shot holes (Figures 7 and 8). Feeding damage caused by larvae and adults will not kill an elm tree but may ruin the aesthetic appearance if the damage is extensive.

Management

Maintaining the health of elm trees through proper watering, fertilizing, mulching, and pruning practices may reduce the damage caused by European elm flea weevil larvae and adults. Insecticides can minimize feeding damage but are difficult to apply to large elm trees. Contact insecticides can be applied during spring and summer to manage European elm flea weevil adult populations and prevent feeding damage. When applying contact insecticides, thoroughly cover

leaves, including the undersides where adults feed. Reapply contact insecticides when new damage occurs or adults are present.

Applying systemic insecticides in early spring before leaves emerge may protect elm trees from damage associated with larvae and adults throughout the growing season. Always read the insecticide label to ensure weevils are listed. Do not apply an insecticide unless damage is extensive (more than 20% defoliation), especially on large elm trees. In addition, do not apply an insecticide to elm trees with extensive damage (more than 50% defoliation) because insecticide spray applications will not save the aesthetic appearance of the elm trees.



Figure 7. Damage to elm leaves caused by European elm flea weevil adults (Photo: Raymond Cloyd).



Figure 8. European elm flea weevil adult feeding damage (Photo: Raymond Cloyd).

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