

European Elm Flea Weevil

Scientific Name: *Orchestes alni* (Linnaeus)

Order: Coleoptera (Beetles)

Family: Curculionidae (Weevils)

Identification and Descriptive Features: Adults are small (3 mm) reddish-brown beetles with black spots. They have a short snout on the head and their hind legs are enlarged to allow them to jump. Larvae are legless, cream-colored grubs found in leaf mines.



Figure 1. European elm flea weevil adult.

Distribution in Colorado: Although the European elm flea weevil was only newly recognized as being present in the state (2008) it is now very widespread and common in many locations. Distribution and incidence of this insect will likely increase in near future.

Life History and Habits: Winter is spent in the adult stage, in the vicinity of previously infested elm trees. Adults resume activity in May and, after mating, females lay eggs in larger veins of new leaves. Upon egg hatch, the larvae tunnel through the leaf as they feed, producing a serpentine mine that gradually enlarges in diameter as the insect gets older. The mines terminate at the leaf edge where they remain and produce a blotchy area of mined tissue. Pupation occurs in the mine and adults emerge in late May and June.



Figure 2. Typical leaf mine produce by larvae of the European elm flea weevil.

Adults feed mainly on the underside of leaves, producing shothole injuries to the leaf interior. Where abundant, the insects will make foliage of affected trees appear lacy. Adults are present through early August then move to sheltering cover for winter. One generation is produced annually.

All species of elms appear to be susceptible to European elm flea weevil to some degree. However, there are indications that several Asian species of *Ulmus*, including the widely planted Siberian elm (*U. pumila*), are more likely to be injured than is American elm (*U. americana*).



Figure 3. Shothole feeding injuries to Siberian elm produced by adult feeding of the European elm flea weevil.



Figure 4. Elm leaves showing shothole wounds produced by European elm flea weevil.

Associated Species: Another common species of leafminer in elm is the **elm leafminer**, *Kaliopenusa ulmi* (Sundevall). This is a species of sawfly (Hymenoptera: Tenthredinidae) that produces large blotch mines in the center of elm leaves. The form of the mines can separate the species as there is elm leafminer mines do not have a serpentine form nor end at the leaf edge. A type of leafmining fly, *Agromyza aristata* Malloch (Diptera: Agromyzidae), that makes serpentine mines in elm is also likely to be present in Colorado.

Shothole injuries produced in the interior of elm leaves are also produced by adults of the **elm leaf beetle**, *Xanthogaleruca luteola* (Muller). Larvae of this species chew on the leaves and produce skeletonizing injuries. Elm leaf beetle is discussed in Extension Fact Sheet 5.521, *Elm Leaf Beetles*.



Figure 5. European elm flea weevil injuries (leafmining and shothole wounds).