

## CARROT RUST FLY *Diptera: Psilidae Psila rosae*

### DESCRIPTION

**Adults** are about 6 mm long, with a metallic greenish-blue body and yellow legs, eyes, and antennae. The wings are often iridescent. **Larvae** are dusky-straw colored and 12 to 14 mm long when mature.

### ECONOMIC IMPORTANCE

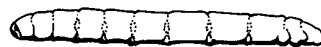
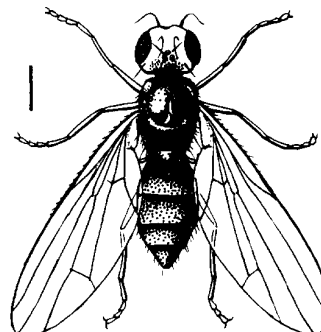
Larval injury on the roots of carrots and parsnips produce stunting, dwarfing, or complete destruction of the plants. In cases of heavy infestation, the larval tunnels cover the entire root. Larval excrement, which is similar in appearance to rust, may be deposited in the tunnels. Injury by the maggots is frequently followed by decomposition of the roots.

### DISTRIBUTION AND LIFE HISTORY

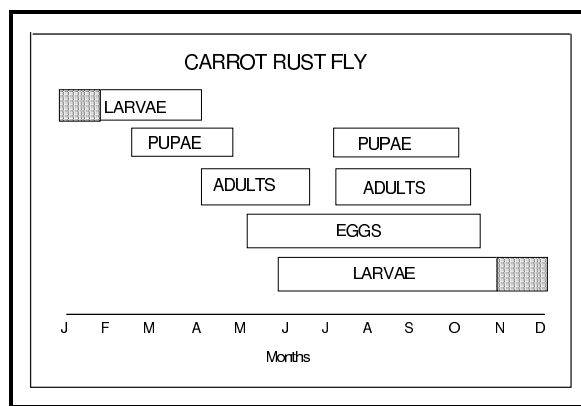
This pest occurs across the northern part of the United States and in southern Canada. The carrot rust fly overwinters as a larva in the roots left in the field. These larvae pupate in February and March and adults begin emerging in mid-April and continue emerging until mid-June. Eggs are laid on the soil surface or slightly below the surface at the base of plants. Larvae are present from June to mid-July and reach maturity in about 30 days and pupate in the soil. The summer brood of flies emerges about mid-July and larvae are present during August. Pupae from this brood can be found in mid-August to late September. The fall brood of flies emerges from late September to mid-October. Larvae enter roots from early October to early November. Larvae from this last brood overwinter in roots in the field.

### MANAGEMENT AND CONTROL

Insecticides are the most important method of reducing damage caused by this pest. Drench treatments at the time of planting protects plants from the spring brood of flies. The third brood can be suppressed by foliar applications in late September or early October. Delaying the spring



(original, Hall)



planting date of the main crop of carrots until late May can minimize fall damage by this pest since the flight period of the emerging adults is completed in the spring before carrots start their growth. This insect has become less serious in the northwest in recent years, but remains as a potential threat for production of carrots.