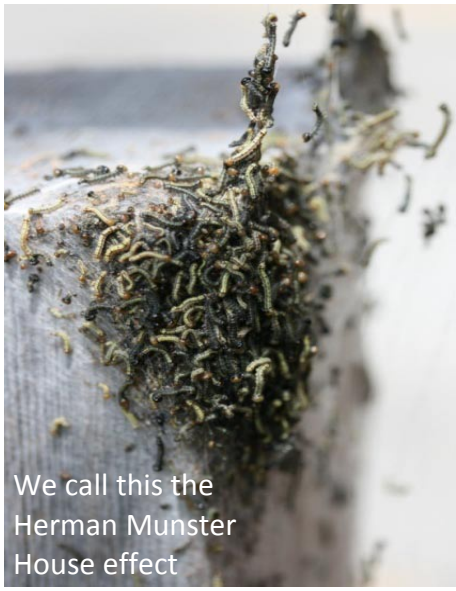
California Oakworm

The California Oakworm (*Phryganidia californica*) is a native insect of coastal California. When heavy outbreaks occur, they voraciously feed upon the leaves of our native Coast Live Oak and deciduous trees. The tan brown adult moths are commonly seen in the late afternoons as they hover around infected trees. They have only one goal which is to mate and lays eggs for the next generation of caterpillars. The moths themselves do not feed on the leaves.

Mating adults

Oakworm outbreaks occur approximately every 8 – 10 years. In the most extreme years, such as we are currently experiencing, the infestation may lead to severe oak defoliation.

During these outbreaks caterpillars are often seen suspended from silk strands, dropping to the ground, and congregating on fence posts, garbage cans, and other available platforms.



We call this the Herman Munster House effect

Healthy oaks usually recover from these defoliation events. Oaks that are simultaneously subjected to stresses of drought, soil compaction, pathogenic infections i.e. Sudden Oak Death Syndrome or Oak root fungus, may be more seriously affected by Oakworm defoliation. Age, condition of trees, as well as human caused impacts must be considered.


Mature larvae consume entire portions of the leaf

Our experience indicates that each infestation will usually last for two years. Those who prefer a pro active approach of control in 2012 will want to read the information and treatment strategies that follow.


Early instar larvae skeletonize the underside of leaves

Tree Solutions does not agree with blanket statements that say this is a native pest on a native tree and no action needed. We acknowledge that there is a symbiotic relationship and in natural undisturbed settings, control is not usually warranted. However, in urban environments, we believe that each tree must be considered individually. Growing environment conditions vary and tree health is often compromised by the urban environment. Many trees are stressed, and stressed trees require action.

How do you know your Oak Trees are infected?


Active larvae
Scraping leaf surface
Winter 08

Early signs are difficult to detect. Tree Solutions recommends monitoring by a certified arborist who is experienced in insect and disease recognition. Early detection and timely treatment is advantageous in controlling the caterpillar outbreak. The pupae are white or yellow with black markings. The mature larvae are 3/4-1 inch long and are olive green with black and yellow longitudinal lines along the back and sides; they have a reddish brown head. The picture shown above is of overwintering larvae feeding on coast live oak tree leaves during a warm spell in January 2008.

Reasons to treat your trees

- Tree Preservation
- Previous year defoliation
- Recent drought conditions
- Construction impacts
- Any construction in the root zone within the last 10 years such as impervious driveways, sidewalks, or trenching for underground utilities, irrigation pipes etc.
- Soil compaction
- Previous disease and/or insect problems

Aesthetics

- You prefer a green canopy year round
- You are selling your property
- You don't like caterpillars crawling everywhere
- Vigorous trees increase property value

Treatment Strategies

Tree Solutions employs several components of an **Integrated Pest Management (IPM)** approach for Oakworm control. It begins with site monitoring followed by action when necessary. When unacceptable pest populations build, control strategies are employed.

We use an array of reduced risk pesticides. We use the bacteria biological control, Bt. (Bacillus thuringiensis) and Pyrethrum which is derived from Chrysanthemum flowers for canopy sprays.

They are pest specific, have short residuals, and have minimal impact on the beneficial insect populations associated with oak trees

There are chemicals being used by some companies that are highly toxic to both humans and wildlife. These full spectrum insecticides kill many organisms which are important to tree health. Before hiring a pest control company, find out what material is used and research the product.


A tree trunk infested with the Oakworm Caterpillar

Spray program

When caterpillars begin feeding they produce frass. Their frass is small and golden brown in color. When frass begins to build, it is time to spray. We suggest that you place a white paper plate beneath the canopy of your oak tree and monitor it once a week for frass droppings. When frass begins to drop, call us for treatment.

Supplemental watering

During drought years, deep soaking of the root zone with water will help reduce tree stress. Deep watering should occur approximately once a month and it needs to reach the fine feeder roots. Your arborist will help you determine an optimum watering schedule and method of applying water. Usually soaker hose or inline emitter hose is preferred to oscillating sprinklers. This is because water must not spray onto the trunks of trees to help prevent root collar diseases.

Sign up for our season- long monitoring program where we will make several timely visits to your home to observe caterpillar populations and begin treatment when necessary. We will also make cursory exams and notify you of other pest and disease problems.

Phone: 831-247-1696 for an appointment