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## Citrus Leafminer

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### Citrus leafminer is a new insect pest of oranges and other citrus in the Bay Area.

#### SUMMARY

Citrus leafminer is a relatively new pest in the Bay Area. Although the damage it causes can be unsightly, the best approach is to allow its natural enemies to feed on and parasitize it.

**Q: I have a very established orange tree and I have recently noticed that some of the leaves are distorted. I am leaving some leaf samples with you. Do you know what it is? I have never seen it before?**

**A:** Yes, you have citrus leafminer. The leafminer is the larva of a very small light-colored moth.

#### Citrus Leafminer Life Cycle:

The adult female moth lays her eggs singly on the underside of citrus leaves. When the egg hatches the larva begins to feed on the leaf tissue. Actually, it chews its way into the middle layer of the leaf creating a tunnel, or mine, inside the leaf. As it moves along and feeds within the leaf its mine leaves a trail that you can see. As the larva grows its mine becomes wider and is more noticeable. When the larva is ready to pupate it emerges from the mine, travels to the edge of the leaf and rolls the edge over itself. Inside the curled leaf edge the leafminer becomes

a pupa from which an adult will emerge 1 to 3 weeks later. The entire lifecycle takes about 3 to 7 weeks depending upon temperature. Both the mines and the rolled edges are causing the leaf distortions you are seeing.

#### Mature Trees Less Affected:

Typically, you will see the mines and edge curling on very young leaves. Older leaves that have hardened off are not as readily susceptible unless extremely high populations are present. Since you said your tree is very established it should be able to tolerate damage to new leaves during part of the growing season. When very young trees with copious amounts of new growth are attacked they can experience a reduction in growth but neither young nor mature trees are likely to die. The flush growth of citrus trees will look unsightly, but the best course of action is to leave them alone and let the natural enemies feed on and parasitize the larvae in the mines.





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**A New Pest:**

The reason you have not seen this before is because it is relatively new to the Bay Area. Its first appearance in the United States was in Florida in 1993. It moved westward and was first found in California in Imperial County in 2000. Since that time it has spread to adjacent counties and continued to move northward.

**For More Information:**

The University of California has some free downloadable publications on the life cycle and management of citrus leafminer. They are:

- *Citrus Leafminer Pest Note* at <http://anrcatalog.ucdavis.edu/Citrus/74137.aspx>
- *Citrus Leafminer and Citrus Peelminer* at <http://anrcatalog.ucdavis.edu/Items/8321.aspx>



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