## CITRUS PEELMINER IN CALIFORNIA





last larval instar



The citrus peelminer [*Marmara gulosa* Guillèn and Davis; Lepidoptera: Gracillariidae] is native to the southwestern United States and northern Mexico. Its host range includes oleander, willow, citrus, cotton, walnuts, bell peppers, plums, watermelon, mesquite, and grapes. It feeds by mining just below the surface of succulent stems and on fruit. It is the mining on the fruit of fresh market crops that causes economic damage.

The life cycle of the citrus peelminer can be completed in about 29 days at 79°F. The adult moth deposits a single egg on the surface on a stem or fruit. The small larva hatches from the egg and begins feeding just below the egg. As the larva grows, it mines the stem or fruit creating a winding mine that grows wider as the larva ages. Just prior to pupation, the larva leaves the mine and locates a suitable site for pupation. Preliminary data suggest that there is no overwintering stage. Rather, the insect continues to complete generations, the length of which is dependent upon temperature.

Currently, studies are being conducted on the life history, biological control, and insecticidal control of the citrus peelminer. From these studies, management plans will be developed. For more information, visit either http://plant.cdfa.ca.gov/biocontrol/ or www.uckac.edu/citrusent/citrus\_peelminer.htm.









