

**LIFE-HISTORY AND ECOLOGY OF VINE MEALYBUG (HEMIPTERA:
PSEUDOCOCCIDAE) IN CENTRAL CALIFORNIA**

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The vine mealybug, *Planococcus ficus*, is a serious pest of grapes in southern and central California. We conducted population dynamic studies, in the San Joaquin Valley, to determine the pest's life history and natural controls. Results show all stages of mealybugs (except adult males) feed throughout the vine on the roots, trunk (under the bark), canes, leaves and the fruits. There are 5-6 generations of mealybugs per year, as suggested by presence of crawlers and male flights recorded with pheromone traps. The key biotic mortality factor is a resident parasitoid – *Anagyrus pseudococci* (Hymenoptera: Encyrtidae). Parasitoid densities were low during the winter (<2%). As the temperature and vine shoot growth increased, mealybugs moved from underneath bark to exposed surfaces such as new canes, leaves and fruits. After which, mortality from *A. pseudococci* increases significantly, rising to 70-90% mortality of the exposed mealybugs in August and September samples. The parasitoid was determined to have potential for augmentative release in spring to reduce mealybug spreading to the leaves and the fruits.