

**FUNCTIONAL REPRODUCTIVE MORPHOLOGY OF THE FEMALE**  
***Homalodisca coagulata* (AUCHENORHYNCHA: CICADELLIDAE)**

Natalie A. Hummel, Frank G. Zalom, Nick C. Toscano<sup>1</sup> and Christine Y. S. Peng

Department of Entomology, University of California, One Shields Avenue, Davis, CA  
95616, USA

<sup>1</sup>Department of Entomology, University of California, Riverside, CA 95251, USA

The functional reproductive morphology of female *Homalodisca coagulata* (Taylor) is described. Future research on the functional aspects of oviposition will be facilitated by this research. It will also aid researchers conducting pest management research on this insect, specifically those attempting to determine reproductive maturity based on ovary development and fertilization. All specimens were collected at the Citrus Research Field Station in Riverside, California. All dissections were performed using a Leica MZ12.5 dissecting microscope fitted with a Leica camera lucida attachment for drawing. Some cleared mounts of genitalia were also made to assist in determining the locations of rami. The insect has 9 abdominal segments, the tenth being the pygofer. The seventh through ninth abdominal segments are modified for reproduction. The ovipositor is almost completely enclosed by the pygofer and consists of 3 valvulae and 2 valvifers. The distal portions of the first valvulae are located exterior to the second valvulae. The first and second valvulae together serve as the ovipositor, consisting of a tube through which an egg can be oviposited into a leaf. The third valvulae envelope the first and second valvulae, and are connected by a membrane, anteriorly and dorsally to the pygofer. The pygofer is split ventrally down the middle line, but appears as one continuous segment dorsally. There are seven main muscles associated with the ovipositor and pygofer. The reproductive system consists of a pair of ovaries with approximately 10 ovarioles per ovary, a pair of lateral oviducts, a common oviduct, a spermatheca and two types of accessory glands. The female morphology follows the general pattern of Cicadellids as a group.