

BENEFICIAL BUGS IN THE DELTA:
CDFA BEGINS RELEASING INSECTS THAT FEED ON INVASIVE WATER
HYACINTH

SACRAMENTO, CA, July 28, 2011 - A small insect, native to South America, has been brought to California waterways thanks to its voracious appetite for water hyacinth, an invasive aquatic plant that chokes the sloughs and canals of the San Joaquin/Sacramento River Delta.

Scientists with the California Department of Food and Agriculture (CDFA) have begun releasing hundreds of water hyacinth plant hoppers in the Delta to reduce infestations of the hearty and troublesome plant. The floating, exotic weed can grow so densely that thick "rafts" of the plants can completely cover a waterway's surface, preventing access by boats and clogging water intake systems.

"Water hyacinth is a serious problem not just for agriculture and our state's water supply, but for anyone who appreciates the natural beauty and recreational value of our waterways," said CDFA Secretary Karen Ross. "CDFA's new biocontrol project will help reduce the impacts of this invasive weed in the Delta."

Initial releases of 750 water hyacinth plant hoppers were made earlier this month in three locations: Whiskey Slough in San Joaquin County, Willow Creek in eastern Sacramento County, and Seven Mile Slough in western Sacramento County. Secondary releases have since been made in Whiskey Slough (1,500 insects) and Willow Creek (3,000 insects). Scientists hope the plant hoppers will thrive in their new home, eventually resulting in self-sustaining colonies. This project shows CDFA's ongoing commitment to the principles of integrated pest management - considering physical and biological approaches and using them whenever possible.

Before a biological control agent like the water hyacinth plant hopper can be released in California, the organism must be cleared by both federal and state regulatory officials through an exhaustive analysis that weighs risks. Biological control agents from outside the U.S. are shipped to a domestic quarantine facility where they are subjected to a series of tests. Only those organisms with high specificity to the target weed are approved for use as biological control agents. The results of the pre-release tests are summarized into a petition requesting permission to release the organism into the field. Once approved, the permitted biological control organism can be mass-reared to high numbers and released at field sites established by biologists.

The water hyacinth plant hopper, known to scientists as *Megamelus scutellaris*, is approximately 1/8 inch in length as an adult. It feeds only on water hyacinth, making it an ideal candidate for release as a biological control agent. The insects feed on water hyacinth leaves by siphoning plant juices into their mouths, much like an aphid on a rose bush. The damage caused by their feeding kills the small area where their siphons are inserted; high densities of plant hoppers and high levels of feeding can cause whole leaves to wilt and die, reducing the infestation and relieving pressure on the waterways.

Native to the Amazon region of South America, water hyacinth has spread to more than 50 countries on five continents. It was introduced into the United States in 1884 at the Cotton States Exposition in New Orleans when display samples were distributed to visitors and extra plants were released into local waterways. By 1895, water hyacinth had spread across the Southeast and was growing in 40-km-long mats that blocked navigation in the St. Johns River in Florida. Water hyacinth was first reported in California in 1904 in a Yolo County slough.

The California Department of Boating and Waterways leads an ongoing effort to reduce the abundance of water hyacinth (*Eichhornia crassipes*), limit its impact on boaters and keep waterways open. CDFA's releases of the water hyacinth plant hopper add another tool to the state's cooperative effort to manage water hyacinth in the Delta.

Photos of the released plant hoppers are available online at http://www.cdfa.ca.gov/exec/public_affairs/WaterHyacinthBiocontrolInsects.html