

Early season population dynamics of salvinia weevil on giant salvinia in central Louisiana
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A single salvinia weevil (Brazil ecotype) (*Cyrtobagous salviniae* Calder and Sands) release was conducted on giant salvinia (*Salvinia molesta* D.S. Mitchell) infestations on Lake Iatt, LA, United States, during 2015. The site was not monitored post-weevil release and it was assumed that yearly water level drawdowns and winter freezing temperatures most likely inhibited salvinia weevil establishment. In February 2017, lake managers surveying for giant salvinia were surprised to discover salvinia weevils present lake wide. Large-scale monitoring efforts were initiated to document the occurrence of an established and self-sustaining salvinia weevil population. Adult and larval salvinia weevil density, plant nitrogen content, and water temperature were monitored every 2 wk during February through July 2017. The detection of larval weevils in February was used to estimate the previous timing of adult salvinia weevil mating and oviposition and it was determined that these reproductive activities occurred at a previously undocumented low temperature range fluctuating between 14.5 and 17 C. Adult and larval densities had a distinct inverse relationship during the early warm season. Adult densities steadily decreased as larval densities increased, indicative of overwintered adults mating and dying soon after. Adult and larval densities stabilized at subequal densities as water temperatures warmed, and continual mating, oviposition, and adult emergence produced stable densities of both adult and larval salvinia weevils in May and June. These monitoring efforts provided a rare field demonstration of the population dynamics of a lake-wide established and self-sustaining salvinia weevil population