

Mexican Bromeliad Weevil Report

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Forty-four fly pupae were collected from our *Lixadmontia franki* colony in July, August and September 2012. This is quite a decline in the number of puparia collected. We have made several changes in the conditions in which we rear the flies, including access to sunlight and increased moisture. We have begun receiving fly puparia from Honduras to supplement the colony. The first shipment (29 puparia) arrived on 9 October 2012. We will receive a few more shipments over the next few months.

The Mexican bromeliad weevil fecundity study is nearing completion. This study has been monitoring the number of eggs laid and the number of eggs from which weevil larvae hatched for the duration of a female weevil's life. We began January 2012 with 60 females. Now, only one remains alive. Data are being sorted and analyzed.

We have begun studies on the Mexican bromeliad weevils that came from Belize compared to those from Mexico. The Belize form is slightly larger, does not have the stripe across the wings and seems to have a slower growth rate than the Mexican form. We are testing the oviposition rate of the Belize form as well as developmental time at 25° C. We have already made these tests on the Mexican form (data are collected and analyzed and being prepared for publication).

Field trips are planned for October, November and December to return to sites with long-term weevil infestations to observe long-term effects of the weevil on different bromeliad species. Sites will include Myakka River State Park, Loxahatchee National Wildlife Refuge, Fakahatchee Strand Preserve State Park, Hillsborough State Park, and St. Sebastian Preserve State Park.

Publications:

Cooper, T.M., Frank, J.H., Cave, R.D. Loss of phytotelmata due to an invasive bromeliad-eating weevil and its effects on faunal diversity and biogeochemical cycles. Re-submitted after revision to *Acta Oecologica* on 26 September 2012.

Presentations:

Cooper, T.M., Frank, J.H., Cave, R.D. The invasive species *Metamasius callizona* (Mexican bromeliad weevil): problems and prospects. World Bromeliad Conference. Orlando, Florida. 27 September 2012. Poster and presentation.