

# Mexican Bromeliad Weevil Report

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**Ronald D. Cave<sup>1</sup>, Teresa M. Cooper<sup>1</sup>, and J. Howard Frank<sup>2</sup>**

<sup>1</sup>Indian River Research & Education Center, UF, Ft. Pierce, FL

<sup>2</sup>Entomology & Nematology Department, UF, Gainesville, FL

A total of 227 fly pupae were collected from our *Lixadmontia franki* colony in January 2013, 188 in February, and 287 in March, for a total of 702 this quarter.

Because the fly colony is remarkably improving, we will be able to resume fly releases soon. The next release is tentatively scheduled for late April/early May at the Fakahatchee Strand Preserve State Park.

We have begun testing our Belize colony of the Mexican bromeliad weevil for oviposition rate, survival, and developmental time (egg to pupa, pupa to adult) at different temperatures. Results so far show a slower developmental time and a lower oviposition rate for the Belize form of the weevil compared to the Mexican form.

We are in the process of getting tissue samples from *Tillandsia utriculata* that grows in Florida and from *T. utriculata* that grows in Central America. The samples will be genetically tested to determine if the Florida and Central American forms of *T. utriculata* are the same species. We are continuing our research of host bromeliad effect on the weevil. We plan to test the Florida and Central American form of *T. utriculata* as well as *T. fasciculata* and pineapple. We have tested developmental time and oviposition rate of the weevil on these host bromeliads using leaf material. We will repeat these tests, only this time we will use whole plants, beginning with pineapple.

## Publications:

Cooper, T.M., Frank, J.H., Cave, R.D. 2013. Loss of phytotelmata due to an invasive bromeliad-eating weevil and its potential effects on faunal diversity and biogeochemical cycles. *Acta Oecologia* <http://dx.doi.org/10.1016/j.actao.2013.01.016>.

## Grant proposals submitted:

Cave, R. D., and T. M. Cooper. Comparison of *Tillandsia utriculata* from Florida and Central America for biotic resistance to the Mexican bromeliad weevil. Florida Native Plant Society, \$1,500, notification in May 2013 (not funded).