

Mexican Bromeliad Weevil Biological Control Report

October 13, 2007

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Production of fly puparia in the Honduran colony steadily increased and is now operating at optimal level. Fly puparia shipped to Ft. Pierce totaled 300 in four consignments. The relatively low number received is due to reduced need in the Ft. Pierce colony, which is very strong, and potential loss of viability during shipment. Flies emerged from three shipments but not from a fourth sent in August. Since fly emergence has been excellent in the Honduran colony, the lack of emergence may be due to possible overheating while in the FedEx delivery truck. For this reason, puparia were received only when necessary (one in September). Deliveries will be resumed regularly at the end of October so that more Ft. Pierce-produced flies will be available for release.

The fly colony at the Biological Control Research & Containment Laboratory (BCRCL) in Ft. Pierce is producing large numbers of puparia weekly (see graph). Weekly puparia production averaged 152, with a maximum of 240. Emergence of adult flies varies between 85 and 90%. Therefore, with only 60 flies needed per week to maintain the colony, about 70-80 flies per week are available for release in the field.

To obtain adequate data for analysis by PhD student Teresa Cooper (this analysis will form most of her dissertation, due in summer 2009), four release sites were selected, and five releases were planned at each site. The first four releases were:

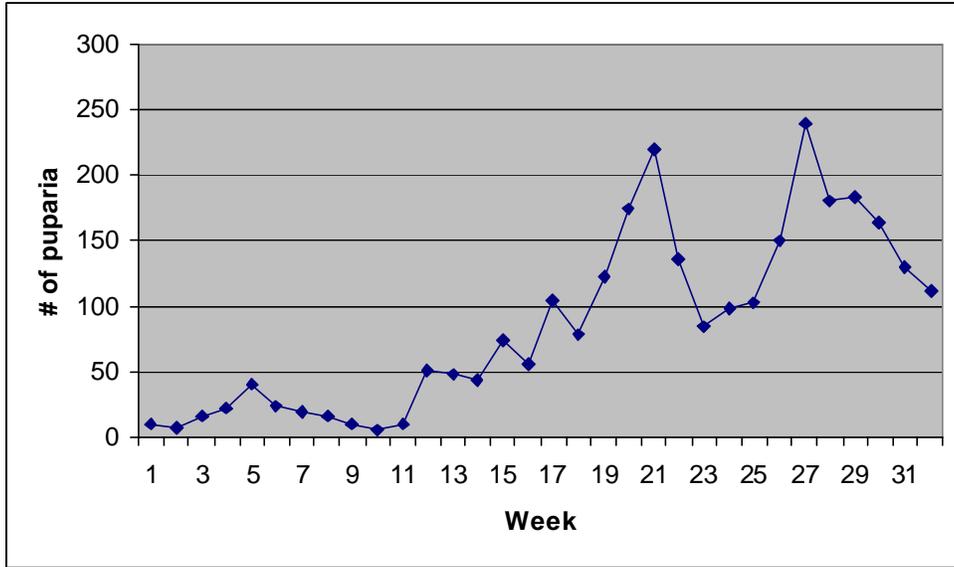
Lixadmontia releases, first set of four:

Location	Date	Male flies	Female flies
Lake Rogers Park, Hillsborough Co.	29 Jun 2007	29	27
Loxahatchee NWR, Palm Beach Co.	20 Jul 2007	35	60
The Enchanted Forest, Brevard Co.	3 Aug 2007	63	63
Big Cypress NP, Collier Co.	29 Aug 2007	44	54

There was a second release at Lake Rogers Park last month, and the second release at Loxahatchee was yesterday, the 12th of October.

Six weeks after each release, Teresa revisits each release site to hang out “sentinel pineapple tops”, each one loaded with a weevil larva of the right growth stage. Two weeks later, she brings the pineapple tops back from the field and puts them in a cage. She checks the cage daily for presence of newly emerged flies.” And now for the exciting news: **on 31 August, Teresa found two newly-emerged flies in the cage with sentinel pineapples brought back from Lake Rogers Park.** These must have been grandchildren of the flies released on 29 June!

A poster titled “Release of the Parasitic Fly *Lixadmontia franki* in Florida to Control the Mexican Bromeliad Weevil, by R.D. Cave, J.H. Frank, T.M. Cooper, and M.S. Burton, was displayed at the 2007 Bromeliad Extravaganza.



Weekly production of puparia of *Lixadmontia franki* as of 9/28/07 at the Biological Control Research & Containment Laboratory, Ft. Pierce.



Ron Cave releasing flies at the Loxahatchee National Wildlife Refuge in Palm Beach Co.



Mike Burton preparing for release of flies at the Enchanted Forest, Brevard Co.



Teresa Cooper and Mike Burton releasing flies in a swampy cypress dome in the Big Cypress National Preserve in Collier Co.



Flies waiting to escape the cage for release at the Northwest Equestrian Park in Hillsborough Co.



Rosa Ortega, manager of the fly colony in Honduras, participating in the fly release at the Northwest Equestrian Park