

Mexican Bromeliad Weevil Report

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Production of fly pupae in the Honduran colony was relatively good during January and February, but dropped in March due to the normal low availability of weevil larvae and low rates of parasitism in the field. Fly pupae shipped to Ft. Pierce totaled 300 in four consignments. The Honduran colony will be discontinued in April and early May because 1) field material and parasitism is low, 2) shipments of pupae during the hot months run the risk of becoming overheated during transit and killing the pupae, 3) the Ft. Pierce colony is doing well and is self-sustainable, and 4) the funding cycle has reached the end.

The Ft. Pierce colony is healthy. Average weekly production of pupae was 113, with a maximum of 231. In January, 602 pupae were produced, in February it was 181, and in March it was 798. The low production in February was due to humidity control problems and the adult fly population was low and old, but both problems were solved before March production began. Average daily emergence of adult flies is about 14, which provides adequate numbers for colony maintenance and field releases.

January 2008. One hundred and thirty flies (68 females, 62 males) were released at the Loxahatchee National Wildlife Refuge on January 11, the third release conducted at that site. At the Enchanted Forest, 109 flies (54 females, 55 males) were released on January 18, also the third release for that site. Ron Cave gave a talk on the weevil biological control program to the Broward Co. Bromeliad Society.

February 2008. On February 1, 78 flies (39 females, 39 males) were released at the Seminole Collier State Park in Collier Co., the first time flies have been released at this site. On February 13, a third release was made at the Big Cypress National Preserve, consisting of 110 flies (55 females, 55 males). Ron Cave gave a talk on the weevil biological control program to the Caloosahatchee Bromeliad Society.

March 2008. Only one release was scheduled during March but it was delayed until early April because specimens for an initial pathology exam were not preserved in alcohol soon enough after dying and specimens for a follow-up exam were misrouted by FedEx.

David Pick, a high school student working in the Ft. Pierce laboratory, presented his research project "EVALUATION OF ARTIFICIAL DIETS FOR REARING METAMASIVUS CALLIZONA (COLEOPTERA: DRYOPHTHORIDAE)" at the Treasure Coast Science Fair in early February and won first place in his category. He has been invited to present his project at the Florida State Science and Engineering Fair in Lakeland in mid-April and at the International Science and Engineering Fair in Atlanta, GA in mid-May. Results from his project will be useful in managing the weevil and fly colonies.

Publications:

- Cave, R.D. 2008. *Lixadmontia franki* Wood and Cave released to control the Mexican bromeliad weevil. *Tachinid Times* 21: 12-14.
- Cave, R.D. 2008. Biological control of the Mexican bromeliad weevil. *Biocontrol News & Information* 29: 1N-2N.
- Frank, J.H., Fish, D. 2008. Potential biodiversity loss in Florida bromeliad phytotelmata due to *Metamasius callizona* (Coleoptera: Dryophthoridae), an invasive species. *Florida Entomologist* 91: 1-8. [This paper documents the aquatic invertebrate animals that depend on Florida bromeliads as habitat. Some of them are undescribed species].
- Frank, J.H., Giardina, D., Andrus, T., Monzón, J. 2007. Searching in Guatemala for more parasitoids to use against *Metamasius callizona* in Florida. *Journal of the Bromeliad Society* 57: 253-258. [Note that captions of Figs. 3 and 4 were inadvertently transposed by the publisher].