

MEXICAN BROMELIAD WEEVIL REPORT

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Starting in January, Dr. Teresa M. Cooper became the direct supervisor of the project's laboratory and field activities. Her duties are to oversee weevil and fly production activities and modify as necessary, coordinate field release of *Lixadmontia franki*, and conduct research on the fly's biology.

The production of *L. franki* pupae was up 13% from the previous three months. Average weekly production of pupae was only 78, with a maximum of 147. In January, 229 pupae were produced, in February 446 pupae, and in March 339 pupae. The trimestral total was 1,014.

Oxbow Eco Center in St. Lucie County has been chosen as a site for releasing and monitoring the fly. The park has moderately large, weevil-infested *Tillandsia utriculata* and *Tillandsia fasciculata* populations growing on trees along the bank of the St. Lucie River. An initial release was set for late March, but was canceled because runaway temperatures in the quarantine facility caused a high die-off in the fly colony. Almost $\frac{3}{4}$ of the fly population died. Since then, it has been necessary to put all flies back into the colony. At present, the number of gravid flies in the colony is 99, which is greater than the number was before the die-off. Changes have been made to protect the fly colony from future adverse temperatures. The next release is scheduled for mid-May at Oxbow Eco Center. Meanwhile, we will continue to map the bromeliad populations at Oxbow (using GPS and mapping software; Figure 1 shows mapping so far completed).

Preliminary research is being done to develop a method for comparing the growth rate of the weevil at different temperatures. Laboratory research on the fly will begin once the fly colony can be maintained around 150 female flies and is capable of providing flies for release.

Approximately 400 *Metamasius quadrilineatus* larvae were collected in Honduras in March with the goal of obtaining *L. franki* pupae to send to Florida for invigorating the colony in Ft. Pierce. The larvae were reared in the laboratory at the Panamerican School of Agriculture. On March 29, 19 fly pupae and 8 weevil larvae were shipped to the quarantine facility in Ft. Pierce and received there on April 1. The weevil larvae were held for emergence of any more fly larvae and the fly larvae are being held for emergence of adult flies, which will be introduced into the main colony. As of April 7, the 8 weevil larvae had pupated and 2 adult flies had emerged from their puparia.

Publications:

No publications.

Presentations:

No presentations.

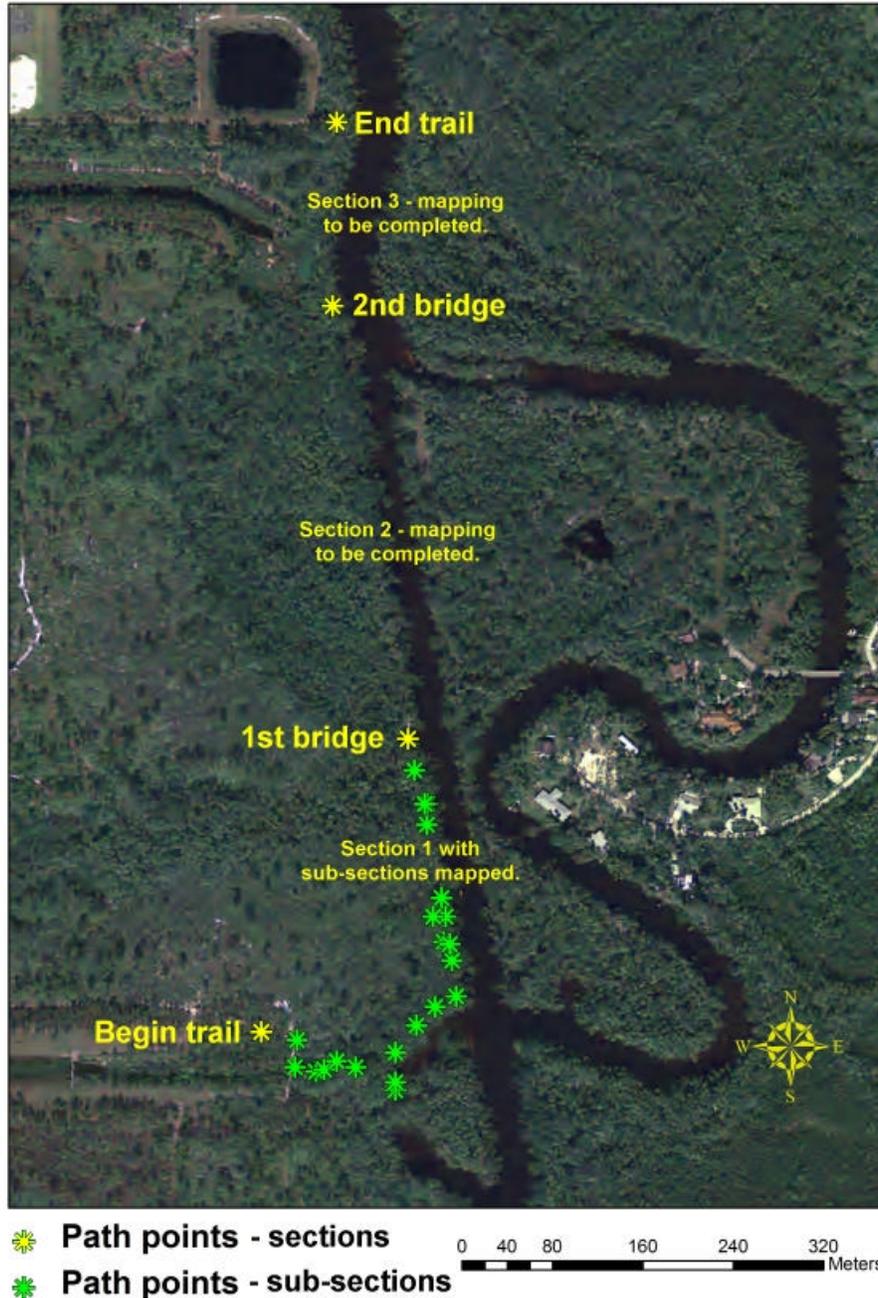


Figure 1. Map of the path at the Oxbow Eco Center following the St. Lucie River. The path is split into 3 sections which are indicated by the yellow dots. The first section runs from the beginning of the trail to the 1st bridge. The second section runs from the 1st bridge to the 2nd bridge. The third section runs from the 2nd bridge to the end of the trail. Sub-sections will further divide the sections. Each sub-section runs 5-40 meters along the path. A baseline count of the number of bromeliads per sub-section will be made before fly releases begin.