

THE MEXICAN BROMELIAD WEEVIL

The Mexican bromeliad weevil, *Metamasius callizona*, is an invasive bromeliad-eating weevil in Florida that is destroying native bromeliad populations. The weevil is from Mexico, Guatemala, and Belize. It came to Florida on shipments of ornamental bromeliads, and in 1989 it was discovered on ornamental bromeliads in a grower's greenhouse. It was too late to eradicate the weevil because it had already become established on native bromeliad populations. Since 1989, the weevil has spread throughout central and south Florida.



Mexican bromeliad weevil, *Metamasius callizona*

Florida has 16 native species of bromeliads and all are epiphytic (they live and grow on trees without parasitizing the trees). Four species are not attacked by the weevil because they are too small to support weevil larval growth. The remaining 12 species are susceptible to attack by the weevil and 8 have been observed being attacked in the field. These 12 species of bromeliads range from central to south Florida, with most of them located in the extreme southern counties. These 12 species vary in size, shape, abundance, and distribution.



The weevil has 4 life stages: egg, larva, pupa, and adult. The female weevil cuts a slit in the base of a bromeliad leaf and inserts an egg. When the larva emerges from the egg, it mines the leaf, but after a few days of growth, the much larger larva exits the leaf and begins to chew the stem of the plant, including the meristematic tissue. The chewing action of the larva kills the plant. The core of the plant falls out, as shown in the photo to the left. A large plant can support several weevils, and several weevil specimens including all life stages can sometimes be found in a fallen plant core. When the larva is ready to pupate, it will construct a pupal chamber out of the chewed plant tissue. The weevil pupates, then emerges as an adult. The adult mates and the cycle continues. It takes about 57 days for development from egg to adult.



Weevil adult and egg



Weevil larva



Weevil pupa



Tillandsia utriculata



Tillandsia fasciculata



Guzmania monostachia



Tillandsia variabilis



Tillandsia pruinosa



Tillandsia simulata



Tillandsia balbisiana



Tillandsia paucifolia



Catopsis berteroniana



Catopsis nutans



Tillandsia flexuosa



Tillandsia floribunda

The 12 native bromeliad species susceptible to attack by the weevil.

THE INVASIVE SPECIES *METAMASIVS CALLIZONA* (MEXICAN BROMELIAD WEEVIL): PROBLEMS AND PROSPECTS

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