



## Induced Pupation in *Diaprepes abbreviatus* (Coleoptera: Curculionidae)

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INDUCED PUPATION IN *DIAPREPES ABBREVIATUS*  
(COLEOPTERA: CURCULIONIDAE)

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*Diaprepes abbreviatus* (L.), is a well known root weevil pest of sugarcane and citrus in the Caribbean Basin (Ballou 1912). The insect was first reported in the United States in 1964 (Woodruff 1964). Beavers (1983) developed an artificial diet and rearing procedures to establish laboratory colonies. Although the larvae grew rapidly on the diet the insects failed to pupate making it impossible to maintain the laboratory colony. Obviously, improved rearing procedures were needed to induce pupation.

We observed that when 120 day larvae were removed from diet and placed in soil, the larvae formed pupal cells. To determine if pupation could be consistently induced by placing 120 day larvae in soil, we collected 280 diet-reared larvae. The average weight/larva was  $620 \pm 9.5$  mg (mean  $\pm$  SE). One hundred and forty larvae were placed individually in 100 ml vials with diet and 140 in a potting soil mix. The soil was Terra-Lite® Mix 500 and consisted of Canadian sphagnum moss, horticultural vermiculite, processed bark (patented), composted pine bark, and washed granite sand. The soil mois-

ture was 50% (wt/wt). The vials were maintained in the laboratory at 27°C under natural L-D cycles for February-May (ca 14 h photophase). Observations were made weekly and life stage recorded.

After 4 months in soil or on diet, 86% of the larvae maintained in the soil had emerged as adult weevils compared to none from diet. When the test was terminated (4 mo), 14% of the vials with soil contained large larvae, pupae, or a dead insect. The mean development time for formation of pupae in the soil was  $49 \pm 3$  days and from pupae-adults  $20 \pm 4$  days. The first pupa was observed after 30 days and the first adult emerged after 60 days from the date when they were placed in soil. About 2% died in both treatments. Four larvae maintained on diet pupated during the 4-mo period. The technique of transferring 4-mo larvae from diet to a soil mix enabled us to maintain the laboratory colony with diet-reared weevils, and to synchronize adult emergence to research needs.

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## A NEW SPECIES AND SYNONYMY IN THE ULIDIINAE (DIPTERA, OTITIDAE)

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The following is presented at this time in order to provide names for 2 species that have been confused. *Euxesta scoriacea* Loew, 1876, has long been misunderstood. My examination of the type in the Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, revealed that it should be placed in genus *Stenomyia* Loew: *Stenomyia scoriacea* (Loew), N. COMB. It is the same as a species that has been known as *Euxesta tenuissima* Hendel, 1910, N. SYN. *Stenomyia fasciapennis* Cresson, 1913, and *Chaetopsis brooksi* Johnson, 1926, were cited as synonyms of *E. tenuissima* in the *Catalog of the Diptera of America North of Mexico* (Stone, A., et al., 1965, U.S. Dept. Agric., Handbook No. 276: 654). The genus *Stenomyia* is more similar to *Chaetopsis* than to *Euxesta* and may be distinguished by my key (Steyskal 1961) and one due to appear shortly in the 2nd volume of McAlpine, et al, *Manual of Nearctic Diptera*.

Specimens exist in several collections under the name *Euxesta scoriacea* Loew, but they actually represent an undescribed species, one that is a true *Euxesta*. Inasmuch as excellent series of specimens have come to hand, the species is described here.