Identification of the Cactus Moth, *Cactoblastis cactorum*

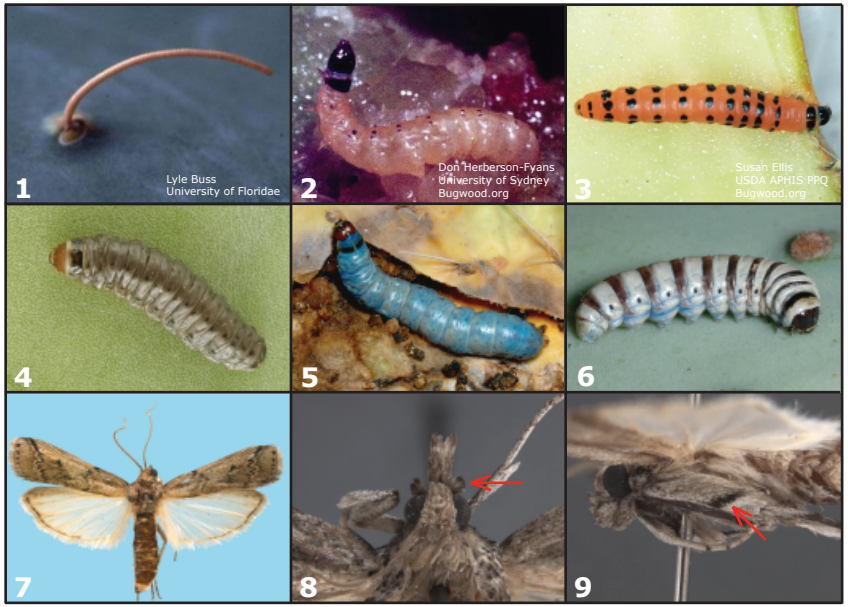
Egg Sticks. Egg sticks of the cactus moth (Fig. 1) cannot be distinguished reliably from those of native species of *Melitara*.

Larvae. Early instar larvae of *Cactoblastis* (Fig. 2) lack distinctive colors and should be examined by a specialist for identification or held in rearing containers to obtain the pigmented later instars. Late instar larvae of *Cactoblastis* are red with black bands or spots (Fig. 3), which differs from all native species in the U.S. that feed on prickly pear cactus (Figs. 4-6).

Adults. Forewings of *Cactoblastis* and *Melitara* are similar in having a gray ground color crossed by a dark zigzag line near base and a double zigzag line near apex (Figs. 7). The anterior, or costal, area of the wing is lightly colored between the zigzag lines. The labial palpi of *Cactoblastis* are long and extend forward beyond the head in females and are shorter and curved upward in males. The maxillary palpi are large and fan-shaped and are visible at the sides of the labial palpi (Fig. 8), a character distinguishing *Cactoblastis* from *Melitara* and other species commonly found in pheromone traps. The antennae of both sexes are simple, without any lateral pectinate projections, whereas the antennae are pectinate in both sexes of *Melitara* species. The middle leg has an oblique black strip on the tibia in *Cactoblastis* and *Melitara* (Fig. 9), but is lacking in many non-target species in pheromone traps. Males have a small, inconspicuous proboscis that is covered with scales in both genera.

Identification of *Cactoblastis* in Pheromone Traps. An identification key for screening pheromone traps is provided on the opposite page. Many non-target species in traps are small phycitine moths that have forewing lengths less than 3/8 inch long. The most common non-target species of similar size is *Spodoptera exigua*, which differs in having a yellow spot near the middle of the forewing, a large, unscaled proboscis, and small spines on the hind tarsi. Also, *Spodoptera* lacks the fan-shaped maxillary palpi and the black band on the tibia of the middle leg.

Other information on the cactus moth can be found at the websites http://www.aphis.usda.gov/plant_health/plant_pest_info/cactoblastis/ and http://www.gri.msstate.edu/research/cmdmn/.



1. Egg Stick of *Cactoblastis cactorum*
2. Early instar of *Cactoblastis cactorum*
3. Late instars of *Cactoblastis cactorum*
4. Larva of *Melitara prodenialis*
5. Larva of *Melitara* sp. (Arizona)
6. Larva of *Melitara* sp. (Texas)
7. *Cactoblastis cactorum* adult
8. Maxillary palpus of *Cactoblastis cactorum* (arrow)
9. Stripe (arrow) on tibia of middle leg of *Cactoblastis cactorum*

Acknowledgements

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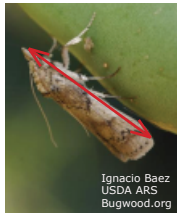
Richard L. Brown and SangMi Lee March 30, 2008
Mississippi Entomological Museum
100 Twelve Lane (P.O. Box 9775)
Mississippi State, MS 39762
(PH: 662-325-2990)

Identification Key for Screening Pheromone Traps for *Cactoblastis cactorum*

Start Here (magnifier required)

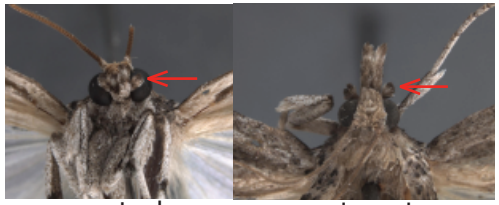
Body length from palpi to end of wing 1/2 - 3/4 inch, or spread forewing length 3/8 - 5/8 inch. If length is uncertain, go to next choice below.



Body length from palpi to end of wing less than 1/2 or more than 3/4 inch, or spread forewing length less than 3/8 or more 5/8 inch.

Discard

Maxillary palpi visible and fan-shaped (arrows), proboscis very small and scaled, hind tarsi without spines.



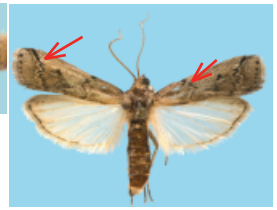
ventral dorsal

Maxillary palpi not visible; tarsi of hind leg with many spines (arrow); proboscis large, without scales.

Discard

Antenna not pectinate and forewing with dark zigzag lines near base and apex.

Cactoblastis cactorum



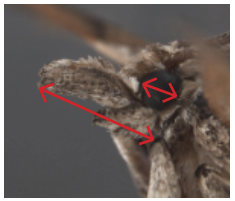
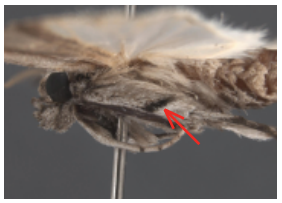
Antenna pectinate or forewing without two zig-zag lines.

Discard

Other Key Characters for Discarding Non-target Species

Forewing with yellow spot (*Spodoptera exigua)*

Length of labial palpi more than 2x width of compound eye (many Pyraloidea)



Middle leg without oblique black stripe (*Cactoblastis* with stripe shown here)