Alert:

Tracking the Cactus Moth, Cactoblastis cactorum Berg., as it flies and eats its way westward in the U.S.

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In 1989, Terry Dickel, a member of the Lepidopterists’ Society, was collecting moths on a sheet at night on Big Pine Key, Florida. He collected a very large phycitine he had never seen before in his extensive surveys of the Florida Keys. He contacted Dale Habeck at the University of Florida at Gainesville who recognized that it was the first U.S. record for Cactoblastis cactorum Berg.

The cactus moth, as C. cactorum is commonly known, is historically notorious as a voracious feeder on cacti in the genus Opuntia, prickly pear cacti (Figs. 2-5, 9; see pp. 4). The moth is the classic example of a successful weed biological control program. It was introduced from Argentina into Australia in the mid 1920’s for the biological control of invasive and non-native Opuntia (Figs. 7-8). Cactoblastis cactorum was then intentionally spread from Australia into other countries with prickly pear problems. The moth was released into Nevis, an island in the Caribbean, in 1956 where it also destroyed native and non-native Opuntias; this action would impact the U.S. in the future.

Dickel’s find of C. cactorum in the Florida Keys may have been the result of the moth naturally dispersing across the Caribbean, or it may have been introduced unintentionally on horticultural prickly pear cacti imported into Florida (Pemberton 1995).

Scientists at the U.S. Department of Agriculture and the University of South Florida have followed the northward movement of the cactus moth. By 2002, the cactus moth had eaten its way from the Florida Keys to Folly Island, South Carolina, on the Atlantic eastern coast and to St. George Island, Florida, on the Gulf coast (Hight, et al. 2002).

The late-instar bright orange-red, black-spotted caterpillars eat any prickly pear cactus with flat pads (Platyopuntiae), and in Florida have been found eating O. stricta, O. pusilla, O. humifusa, O. cochenillifera and O. ficus-indica (Figs. 3-5). The caterpillar also attacks endemic, rare Floridian cactus, like O. coralicola and O. triancantha. The Nature Conservancy has tried to protect cacti by physically removing the egg sticks (Fig. 1). Adult females of the cactus moth lay eggs stacked one on top of the other so that they resemble the spines of cacti.

The cactus moth is currently feeding on O. stricta along the Gulf of Mexico, and in 2003 it was found as far west as Pensacola, Florida. If the moth continues its westward spread at the recent rate of 100 miles/year, then the insect is expected to arrive at the Texas border by 2007 (see map). The USDA in Florida will not be able to track it beyond Florida due to budgetary constraints and lack of a research mandate for this species.

We call upon the members of the Lepidopterists’ Society who live and/or collect in Alabama, Mississippi, Louisiana, and even Texas to keep watch for this moth when they are collecting in the field. To aid in that endeavor we are providing photographs of the immatures and adults of the two most common species that occur in the southeastern U.S. (Figs. 2-6, 9-10) [see also Neunzig 1997]. If you think you have collected either a larva or an adult of Cactoblastis cactorum in states along the Gulf of Mexico, please contact Alma Solis at asolis@sel.barc.usda.gov before sending material for identification.

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**Tracking the Cactus Moth...**
Key to Florida Phycitine Larvae Associated with Opuntia spp.

1. Orangish-red with conspicuous dark spots forming transverse bands (Figs. 2-4) .......................................................... Cactoblastis cactorum

2. With small dark spots (older larvae turning purplish) (Fig. 6) ...................................................................................... Melitara prodenialis

3. Dirty white; gregarious ...................................................... Rumatha glaucatella

2'. Without spots ....................................................................................................... 3

3'. Dirty white; gregarious ...................................................... Ozamia lucidalis

Note: The original key included Laetilia coccidovora (J. H. Comstock). Larvae of L. coccidovora are often found feeding on scale insects, not on Opuntia plant pads. L. Laetilia coccidovora larvae are much smaller, only 8-12 mm long, in comparison to 20-30 mm long for the species included in the key above. The wingspan of L. coccidovora adults is 10-18 mm and that of C. cactorum is 22-35 mm.

References:
1. Carr, W.R., Rare Plant Survey and General Plant Inventory of Hamilton Pool Preserve, Travis County, Texas. Summer, 1996. Travis County Transportation and Natural Resources Department.
2. Personal communications with Chris Durden, Mike Quinn and Chuck Sexton.

Acknowledgments
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Literature Cited


A “tasso”-like Aberration of Papilio torquatus

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Papilio torquatus is a variable, wide-ranging species with many subspecies known to occur from Mexico to southern Brazil and northwest Argentina. It is quite common in possible hybrid origin between P. himeros and P. torquatus. Johnson & Matusik (1987) tend to agree with that position but also with the possibility that the known specimens are either