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WATCH FOR THE CACTUS MOTH

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Colorado State University

The invasive cactus moth (*Cactoblastis cactorum*) is expected to arrive in Texas by 2007. The caterpillars of this moth could cause serious environmental damage because they eat only cactus. They prefer cactus from the genus *Opuntia*, including the well-known pricklypear - the state plant of Texas.

Originally from South America, the cactus moth was discovered to have made it into Florida in 1989. This invasion may be welcome by ranchers who are weary of pricklypear on their rangeland. However, extensive destruction of pricklypear cactus throughout Texas will cause ecological imbalances.

Some ranchers value pricklypear as an emergency forage for cattle during drought. The caterpillar of the cactus moth could eliminate that emergency supply. Loss of pricklypear will also negatively affect wildlife, birds, insects and other plants. These imbalances could eventually increase soil erosion and decrease water quality.

This insect is astonishingly destructive. Even though it has natural enemies in its native South America, it still causes major problems to cactus plantations and wild cactus plants in that area.

To illustrate its voracious appetite, the cactus moth was intentionally released in Australia in 1925 to destroy weedy non-native cactus. Within 10 years, the caterpillars of the cactus moth had destroyed 90 percent of cactus plants covering 25 million acres in Australia.

Because of this destructive history, we can expect serious environmental problems when the moth arrives in Texas. Wildlife could be directly and indirectly affected because pricklypear serves as a source of food, water and cover. Deer, javelina, bear and many smaller mammals eat the pads and fruits of pricklypear cactus. Wildlife rely on cactus pads for their high water content, especially during drought.

Pricklypear plants often serve as a nursery of cover for valuable forage grasses. They provide shelter for grass seedlings during high temperatures and inhibit foraging by grazing and browsing animals, allowing seedlings to become established. The cactus plants provide habitat for insects, birds and some small animals. Cactus plants provide nesting cover for bobwhite quail in areas of short grass.

The caterpillar stage, or larvae, of the cactus moth is the destructive stage. The moth itself is not damaging to pricklypear. The moth stage, adult, is nocturnal, resembles many native moths and is difficult to identify. The caterpillars can be seen during the daytime. They are orange with black spots that form bands.

The moth lays its eggs on cactus spines. The eggs form a chain that closely resembles the spine itself. The eggs hatch within three to five weeks. When the caterpillars are very small they form a single hole in the cactus pad where they all enter the pad. Once inside, the caterpillars feed voraciously for one to two months.

As they consume the nutritious and juicy insides of the cactus pad, they excrete a brown “goo” that can be seen on the outside of the pad. Once the caterpillars are fully developed they leave the cactus plant and spin their cocoons in the nearby leaf litter or other protected spots. The moths emerge and the cycle continues.

In all other countries where the moth exists it produces two generations per year. Evidence indicates the cactus moth is producing three generations per year in the United States. This has scientists very concerned.

What is being done?

The cactus moth was officially identified on Dauphin Island, Alabama in summer 2004. At its rate of spread, without any mitigations, *C. Cactorum* could reach Texas by next year. The USDA Animal and Plant Health Inspection Service (APHIS) has been working with the USDA Agricultural Research Service (ARS) and the U.S. Department of the Interior’s U.S. Geological Survey (USGS) to prevent the westward spread of the cactus moth.

In 2005, researchers conducted a sterile insect technique (SIT) validation study on barrier islands at Florida and Alabama to determine whether the cactus moth’s western movement could be halted. SIT is believed to be the most promising control method. Mass-reared sterile moths are released to limit the reproductive capability of healthy females. This method is effective without using chemicals, which could harm other insects, animals or plants.

APHIS has partnered with the state departments of agriculture in the southern United States to survey nurseries and homeowner properties for cacti infested by the cactus moth. These surveys will monitor pricklypear populations on lands managed by U.S. Fish and Wildlife Service (USFWS), National Park Service, Bureau of Land Management (BLM), Forest Service and Department of Defense (DOD), the Nature Conservancy and master gardeners under USDA’s Cooperative State Research, Education and Extension Service (CSREES).

The information from these surveys will help to track the progress of the insect. Interstate transport of the moth through nursery plants is a major concern since cactus plants are so popular throughout the southwestern United States.

What can you do? Be aware of this destructive insect and look for the caterpillars wherever there are cactus plants, especially pricklypear.

If you think you might have cactus moth caterpillars in your area, please contact Dr. Barron Rector, Extension range specialist, Texas Cooperative Extension, b-rector@tamu.edu.

For more information on this potential invader, visit these websites: www.invasivespecies.gov , www.invasivespeciesinfo.gov/docs/nisc/cactusmothstateholder.doc , www.aphis.usda.gov/ppq/ep/emerging_pests/cactoblastis/

For further information please contact Dale C. Brandenberger, County Extension Agent - Agriculture, at 325-446-2620 or email d-brandenberger@tamu.edu. **The Kimble County Extension web site <http://kimble-co.tamu.edu/> also contains helpful information and links to other sources.**